DOCUMENT RESUME

ED 340 680 SP 033 478

AUTHOR	Anderson, Robert, Ed.; Kickbusch, Ilona, Ed.
TITLE	Health Promotion: A Resource Book.
INSTITUTION	World Health Organization, Copenhagen (Denmark). Regional Office for Europe.
REPORT NO	EUR/ICP/HSR-612
PUB DATE	90
NOTE	401p.
PUB TYPE	Collected Works - General (020)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Adults; Child Health; Children; *Community Health Services; Developed Nations; Disease Control; Family Health; Foreign Countries; *Health Education; *Health Promotion; Mental Health; Preventive Medicine; *Primary Health Care; *Public Health; *Well Being
IDENTIFIERS	Canada; Finland; Ireland; New Zealand; United Kingdom; *World Health Organization

ABSTRACT

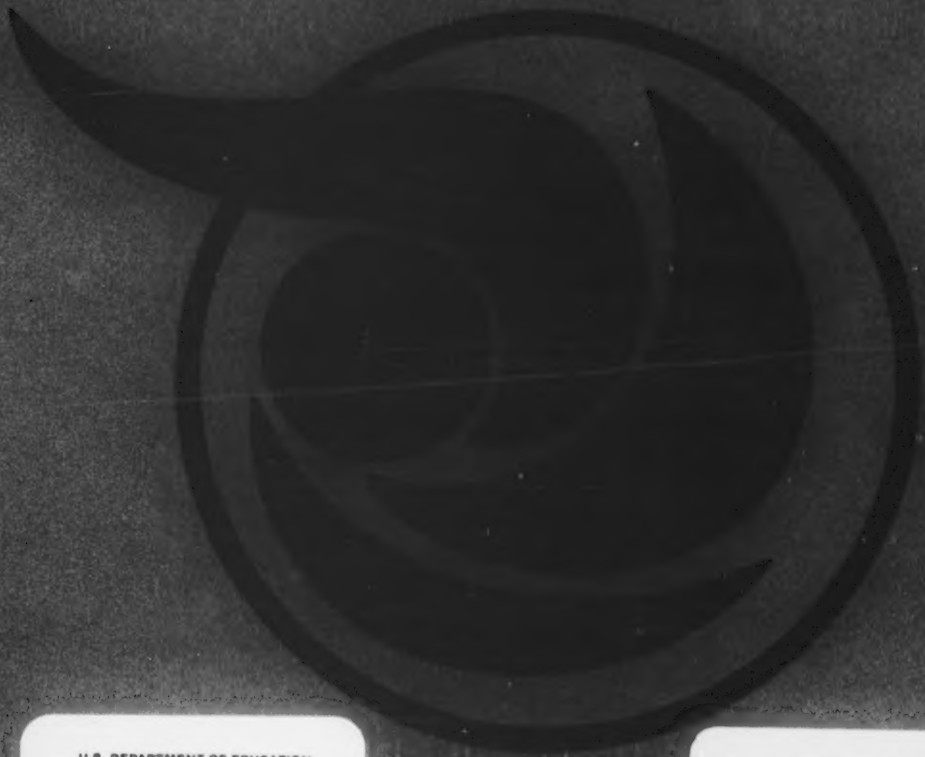
Health promotion redirects thinking about health by: reasserting its social and political aspects; ensuring the people the power to define their own health concerns; and placing health more clearly in the context of other aims in life. This compilation of 41 articles in 8 sections attempts to document this process of redirection of thought. The eight sections are titled: Rethinking Health and Disease; Refocusing Problems for Health; Redefining the Paradigm; Identifying the Actors and Their Roles; Introducing Social, Economic, and Political Change; Moving towards New Practice; Taking Note of Some Dilemmas; and A Perspective on the New Public Health. Each section contains one or more articles selected to reflect change on a global scale in the industrialized countries, including Canada, Ireland, Finland, New Zealand, and the United Kingdom. Some topics covered are: holistic medicine, wellness, a social concept of health education, changing lifestyles for health improvement, maternal and child health, mortality decline and social inequalities, disease prevention, health education and health promotion, primary health care, government attitudes, inequalities in health, training health educators, mental health, community health promotion, program implementation, ethics, and public health. (AMH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED340680

HEALTH PROMOTION

A RESOURCE BOOK



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
● Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN **OTHER THAN PAPER COPY** HAS BEEN GRANTED BY
M. Jones
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SP 033 478

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR EUROPE
COPENHAGEN

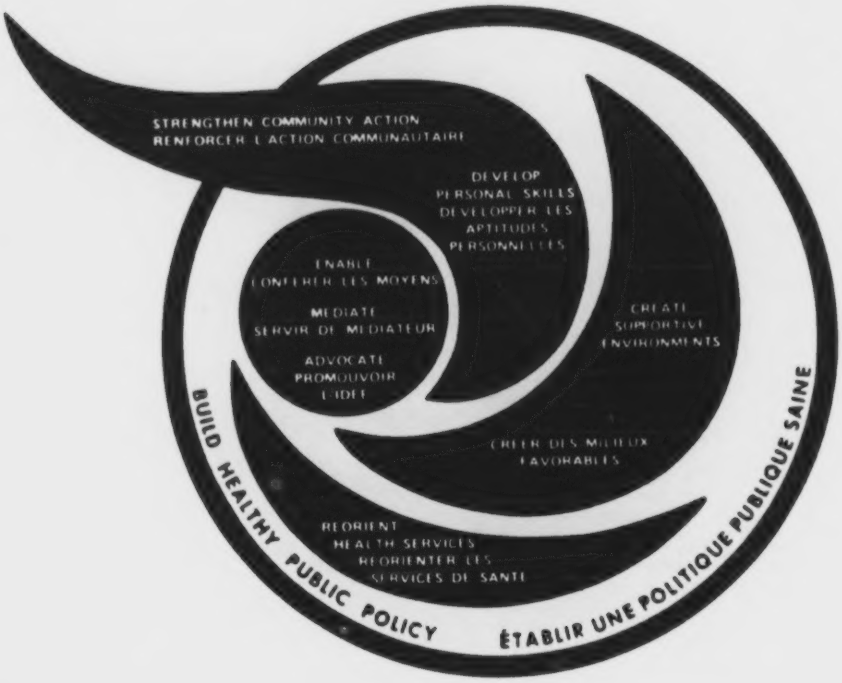
BEST COPY AVAILABLE

HEALTH PROMOTION

A RESOURCE BOOK

Collected by

Robert Anderson
and
Ilona Kickbusch


STRENGTHEN COMMUNITY ACTION
RENFORCER L'ACTION COMMUNAUTAIRE
DEVELOP PERSONAL SKILLS
DEVELOPPER LES APTITUDES PERSONNELLES
ENABLE
CONFERER LES MOYENS
MEDIATE
SERVIR DE MEDIATEUR
ADVOCATE
PROMOUVOIR L'IDEE
CREATE SUPPORTIVE ENVIRONMENTS
CREER DES MILIEUX FAVORABLES
REORIENT HEALTH SERVICES
REORIENTER LES SERVICES DE SANTE
BUILD HEALTHY PUBLIC POLICY
ÉTABLIR UNE POLITIQUE PUBLIQUE SAINE

1990

EUR/ICP/HSR 612

TARGET 13

Healthy public policy

By 1990, national policies in all Member States should ensure that legislative, administrative and economic mechanisms provide broad intersectoral support and resources for the promotion of healthy lifestyles and ensure effective participation of the people at all levels of such policy-making.

Index:

HEALTH PROMOTION
HEALTH EDUCATION

CONTENTS

Page

INTRODUCTION Health promotion: an emerging paradigm 1

I. RETHINKING HEALTH AND DISEASE

People
Halfdan Mahler 5

Holistic medicine: from pathology to prevention
Kenneth R. Pelletier 17

The value of medical care for health promotion
Milton I. Roemer 21

Health and disease: conceptualization and its importance for models relevant to health research
P.H.N. Wood 33

Involvement in health: a social concept of health education
Ilona Kickbusch 43

The wellness process
John G. Bruhn, F. David Cordova, James A. Williams and Raymond G. Fuentes, Jr 57

II. REFOCUSING PROBLEMS FOR HEALTH

Changing lifestyles to improve health
Robert J. Haggerty 69

Sick individuals and sick populations
Geoffrey Rose 79

Strategies for disease prevention and health promotion in maternal and child health: the "ecological" versus the "high-risk" approach
Robert W. Chamberlin 91

Mortality decline and widening social inequalities
M.G. Marmot and M.E. McDowell 101

Relationship of physical health status and health practices
Nedra B. Belloc and Lester Breslow 109

III. REDEFINING THE PARADIGM

Health promotion: a discussion document on the concept and principles 121

Towards a definition of health education and health promotion
John Catford and Don Nutbeam 127

The mandala of health: a model of the human ecosystem
Trevor Hancock 129

Health education versus health promotion - a practitioner's view
Howard Seymour 139

Primary prevention and health promotion in mental health
Harold L. McPheeters 143

The concept of health promotion and the prevention of adolescent drug abuse
Cheryl L. Perry and Richard Jessor 153

A framework for prevention: changing health-damaging to health-generating life patterns
Nancy Milio 169

IV. IDENTIFYING THE ACTORS AND THEIR ROLES

Promoting health, preventing disease: what should the NHS be doing now?
John C. Catford and Don Nutbeam 179

Government attitudes to health education: a crucial factor in effective action
Hakan Hellberg 191

The exceptional potential in each primary care consultation
N.C. Stott and R.H. Davis 197

Wellness: an emerging opportunity for health education
Richard Petosa 205

Participation in primary health care
Peter Pritchard 211

Community health initiatives and their relationship to general practice
Alison Watt 217

V. INTRODUCING SOCIAL, ECONOMIC AND POLITICAL CHANGE

Three types of health education
Peter Draper, Jenny Griffiths, John Dennis and Jennie Popay . 221

Person, society and planet: the changing context for health
James Robertson 227

Inequalities in health. The Black Report: a summary and comment
Alastair McIntosh Gray 239

Training health educators for social change
Nicholas Freudenberg 253

VI. MOVING TOWARDS NEW PRACTICE

Theory and action for health promotion: illustrations from the North Karelia project
Alfred McAlister, Pekka Puska, Jukka T. Salonen, Jackko Tuomilehto and Kaj Koskela 263

Health education in the general practice consultation: doctors' advice on diet, alcohol and smoking
Mary G. Boulton and Anthony Williams 277

An approach to health promotion in one region
John Ashton and Howard Seymour 291

The helping network approach: community promotion of mental health
Marc Pilisuk, Susan Hillier Parks, Jacqueline Kelly and Elizabeth Turner 301

Mental health promotion in the community: how to do it
John M. Raeburn 313

Applications of social support theory to health education: implications for work with the elderly
Meredith Minkler 323

Health promotion in action: practical ideas on programme implementation 339

VII. TAKING NOTE OF SOME DILEMMAS

Canadian perspectives in health promotion: a critique
Ronald Labonté and Susan Penfold 345

Sounding board. Health education: panacea, percinious or pointless?
Ellen J. Cohen and Carl I. Cohen 359

Ethical dilemmas in workplace health promotion
John P. Allegrante and Richard P. Sloan 365

Health promotion: a personal view from the south
Debabar Banerji 373

Ethics and health promotion
Michel Manciaux, Bernard Pissarro and Elisabeth Zucman . . . 377

VIII. A PERSPECTIVE ON THE NEW PUBLIC HEALTH

Health promotion - the move towards a new public health
Ilona Kickbusch 381

INTRODUCTION

HEALTH PROMOTION: AN EMERGING PARADIGM

The achievement and maintenance of good health is one of the profound social challenges in the industrialized societies. Of course health issues have always been of concern to society, but until recently they have been defined mainly in terms of disease and death, rather than in terms of enhancing health and the quality of everyday life. The history of public health has been charted in the decline of communicable diseases, the decline of infant and maternal mortality, and in the increase of average life expectancy. The debate about what contributed to this development still wages - was it due mainly to medical progress and increased availability and quality of medical services or was it due in larger part to environmental and societal changes over the last decades? This debate between two basically different paradigms is taken up in this reader, which is designed to reflect and document the emergence of a new paradigm which confronts the new challenges in the health field.

The emergence of health promotion is an expression of the search for a means to react to major new public health challenges. These include the changing panorama of health problems, the continuing blight of gross inequalities in health and the growing interlinkages between health conditions in different parts of the world. The solutions to many of the world's health problems lie beyond the means and interventions of the health care systems; they require political will and action, and the coordinated efforts of people from many sectors of society. The growing acknowledgement of good health as a resource for and product of everyday life has underlined the role that people play in defining and maintaining their health; and it has reaffirmed the requirements for people to be able to satisfy their health needs through social movements, community participation and public involvement in the health care system.

Medical care is yielding diminishing returns. It has not lived up to the promise of providing more health in society. It has not reacted adequately to the changes in the illness panorama of the developed world and it is moving with great speed into technological solutions that are of little help to those who are hungry, in chronic pain or in fear of death. In many countries public expenditure on health systems has reached a limit that politicians and bureaucrats are no longer willing to accept. Medical care has become the focus of political discussions on levels of public expenditure. Meanwhile public health is only slowly retracing its ecological and social tradition and trying to redefine its responsibilities in the face of new health problems due to social, economic and environmental hazards. Health promotion has come to represent a unifying concept for those who recognize the need for integrated public health action at different levels on the factors that influence health.

A positive future is possible. Public health has always been improved by a timely interaction of social action for health and scientific knowledge about health. A new distribution of health problems calls for both a widened scientific basis for public health and a reconsideration of ways to improve it. Agents for change towards a more healthy society are to be found the world over in health movements, self-help organizations, among ecologists and in groups of health professionals moving towards primary health care. Our knowledge on the factors influencing health has widened into social epidemiology, self care research, health culture research and research on the interaction between the individual and the social and physical environment. These elements can consciously be brought together to renew public health. However, it needs political will to bring together the tools and the knowledge available for a change in public health. It needs thinking along new lines in order to understand the determinants of the new problems and to grasp opportunities that reach far beyond the health care system.

Health promotion redirects thinking about health:

- by reasserting its social and political aspects;
- by ensuring the people the power to define their own health concerns;
- by placing health more clearly in the context of other aims in life.

In this book we are trying to document this process of redirection.

The approaches and types of intervention developed in the first public health movement help us to understand the roots and historical patterns that are central to the development of health promotion. The success of the first public health movement was founded on two premises: first, an emphasis on preventive health through collective social action, rather than individualized, curative approaches, and secondly, a political, rather than professional legitimacy with respect to its values. Three distinct approaches to public health interventions have been developed in the last 100 years.

Environmental hygiene. Public health intervention: social and environmental manipulation based on legislative and adminisrative action such as sanitary engineering, traffic safety, fluoridation.

Preventive medicine. Professional intervention: medico-technical system manipulation such as vaccination, regular health examinations, early diagnosis, screening for specific disorders.

Behaviour modification. Personal intervention: behaviour and lifestyle manipulation in the context of large-scale intervention studies or health education campaigns.

In the industrialized world these approaches represent a historical sequence. They reflect a gradual shift of focus from a social and collective approach to one emphasizing individual responsibility for health.

The first public health movement identified many of the dilemmas of public health today: governments oppose structural changes and prefer remedial approaches, for example; the public is not involved in many public health measures and so opposes them, especially when health measures for the common good are reinforced by the police; laws will override the individual's private rights for public benefit; and prohibiting and controlling social habits is politically sensitive and subject to serious ethical considerations.

When we started to think about this book, the issue of health promotion was still highly controversial, and the genesis of these new ideas was strongly interdisciplinary, with links to medical, epidemiological, historical and social sciences. The WHO European Office had just established a new programme called "health promotion" which as one of its first acts developed the "Concept and principles of health promotion" (see Chapter 4). Following this we began a process of identifying the literature that had most influenced the thinking of people who were trying to put the new ideas of health promotion into concrete plans and action. Of course this book does not lay claim to a epistemology of the new public health - but it hopes to make available some elements of the process that led to it.

It is only over time that the structure of our thinking becomes clear and it was only quite late in the day that the chapter headings for this book emerged and the wealth of material we had collected fell into place. The articles in the book are organized to reflect different elements in the process of translating the message of scientific knowledge into new concepts for action and subsequently into the assessments of new practices and policies. The pace of development in the field of lifestyles and health has been terrific over the last decade, and the organization of the book is not intended to parallel any chronology of the development of the new paradigm. In a sense we are still too close in time to the action, and consensus on a framework for concepts, policies and practice is still being established. However, the development of policies and strategies to protect and promote health has accelerated, adding fuel to the scientific, ethical and political debates, and, in turn, being replenished by them.

The documents presented in this book have been selected to reflect public health action at different levels and in several countries. So they include initiatives in public policy and local government as well as in primary health care, but with an emphasis on the latter. Similarly, the articles reflect change on a global scale in the industrialized countries - including Canada, Ireland, Finland and New Zealand - but activities in the United Kingdom have been overrepresented. Both these biases are intended, in order to provide some continuity and focus on the development of health promotion in the context of primary health care in the United Kingdom, but it is not intended to suggest that health promotion has advanced any more rapidly in that country than elsewhere. The debates and dilemmas, but also the pressures to put health promotion into practice will be familiar to readers in most of the industrialized world.

I. RETHINKING HEALTH AND DISEASE

PEOPLE[a]

by
Halfdan Mahler

The ultimate goal of economic development is to improve the wellbeing of people. The building of factories, the terracing of land and the training of engineers are but means toward that end; enhancing the reputation or wealth of political leaders and increasing the prestige or power of nation states are irrelevant. Improving the health of people is fundamental to improving their wellbeing. This being so, it is important to know what "health" means. Health has long been defined by the 155 Member States of the World Health Organization (WHO) as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity". The ultimate goal of development can therefore be said to be health, in this broad sense, for all the people of the world. It is as simple as that - and as complex.

It is complex because when it comes to defining health policies, assigning priorities, allotting funds and planning and operating programmes to give effect to the policies, it is not easy for political leaders or technical experts in either the underdeveloped or the developed countries to keep in mind the centrality of human development. There are two conventional ways to view the relation between health and development. One sees health as a prerequisite for development. The other sees health as a concomitant of development. Both views are supported by evidence and both can motivate humane development programmes. They are not even mutually exclusive; rather they are mutually supportive.

Health is indeed a prerequisite for economic and social advance. Mahatma Gandhi once put it: "God does not speak to an empty stomach or a sick body". Neither does the development message. Human energy is the fuel that drives development, the source not only of physical work and other economic activity but also of hope for the future, social awareness and the ability to absorb and apply new knowledge, all of which are essential to development. Genuine measures to improve health are likely to contribute to general socioeconomic advance.

The question is not how much countries can afford to spend on the health of their people; it is how much they can afford not to spend on it. Relying on economic calculations to determine the minimum fraction of a nation's resources that should be devoted to health carries the danger of providing a theoretical minimum energy level for economic production. The critical amount of human energy in question, however, is the amount required to initiate social and economic development. Even more important, when so-called health measures are motivated primarily by economic objectives, they are often not accepted by the public. The history of attempts to limit population provides a good example. People have been unwilling to limit their families simply because a government or a well-meaning international agency thinks they should do so in order to slow population growth and so relieve pressure on a country's resources or the world's. Health measures, including family planning, are effective only when they are oriented toward the perceived needs of individuals, families and communities.

---

[a] This article was published in Scientific American, 243(3): 63-73 (1980).

Just as health promotes development, however, so development tends to promote health. There is a strong correlation between per capita gross national product on the one hand and such indexes of health as life expectancy and infant mortality on the other. The correlation is observed not only when the developed world is compared with the underdeveloped but also when poor countries are compared with the very poorest and when the urban and rural areas of a particular underdeveloped country are compared.

And yet not all activities aimed at economic growth promote health. Presumed economic advances can dislocate viable communities, worsen the lot of small farmers, create urban slums and widen income disparities. (The well-meaning "green revolution" provided dramatic examples of some of these effects.) Development projects unattended by preventive health measures can increase the incidence of certain diseases. And, as is well known, in many developed countries with advanced health establishments and technology the acute infections have disappeared as major causes of death and illness only to be replaced by chronic mental and physical conditions promoted by stress, pollution, industrial hazards and family disruption.

Health is a fundamental human right, as the Constitution of WHO recognized more than 30 years ago. It must therefore be pursued for itself, and not only as a prerequisite for development. The true goal of development - the wellbeing of people - can be achieved only by way of an approach to development that is oriented to the needs of people.

- oOo -

Nearly a billion people are trapped today in a vicious circle of poverty, malnutrition, disease and despair that saps their energy, reduces their work capacity and limits their ability to plan for the future. For the most part they live in the rural areas and urban slums of the underdeveloped world. The depth of their deprivation is measured by a few statistics. Whereas the average life expectancy at birth is some 72 years in the developed countries, it is about 57 in the underdeveloped word as a whole; in Africa it is only about 49, in southern Asia 51. The wide differences stem largely not from varying longevity but from the differential impact of infant and child mortality. Whereas fewer than 20 of 1000 infants born in most developed countries die during their first year, the infant mortality rate in most developing countries ranges from nearly 100 to more than 200; in the poorest regions of those countries half of all children die in the first year of life. Whereas the death rate for children between one and five is less than 1 per 1000 in most developed countries, it averages about 6 in Latin America, 10 in Asia, 30 in northern Africa and more than 30 in Africa south of the Sahara. In a typical underdeveloped country more than a third of all deaths are among infants and children under five. Even for those who reach that age life expectancy in the underdeveloped countries is from six to eight years less than it is in developed countries. The extent of sickness and disability is much harder to document than mortality, but some studies have suggested that a tenth of the life of the average person in a developing country is seriously disrupted by illness.

The pattern of disease in the underdeveloped world is very different from the pattern in industrialized countries. In a typical developing country, it has been estimated, more than 40% of the deaths are from infectious, parasitic and respiratory diseases (compared with about 10% in a typical industrialized country, where the major causes of death are heart and vascular diseases and cancer); studies have shown that as the percentage of deaths due to infectious and parasitic disease drops life expectancy increases. The most widespread diseases in developing countries are diarrhoeal ones transmitted by human faecal contamination of soil, food and water. Only about a third of the people in the world's poorest countries have dependable access to a safe water supply. The parasitic diseases in particular are usually chronic and debilitating rather than acute, and they are endemic in most poverty-stricken areas.

Diseases transmitted by insects and other vectors are also widespread and have serious impact in particular regions. Malaria remains the most prevalent disease in spite of the fact that it can be prevented by routine administration of inexpensive drugs or by spraying to kill the Anopheles mosquito and its larvae; some 850 million people live in areas where malaria has been only partially controlled, another 350 million in areas that still lack active control efforts. Schistosomiasis, caused by a snailborne parasite, is endemic in some 70 countries, where an estimated 200 million people are infected. Onchocerciasis, or "river blindness", is caused by a worm whose larvae are transmitted by blackflies of the genus Simulium, whose larvae in turn live in fast-flowing water; in some hyperendemic regions more than 20% of the adults may be blinded by the disease. Ironically, development projects have increased the incidence of schistosomiasis and onchocerciasis: drainage and irrigation canals provide a habitat for the snails, the spillways of dams for the blackfly larvae.

At least some 450 million people - perhaps as many as a billion - have less food than is necessary for basic survival: in the underdeveloped world about a fourth of the people have a food intake below the critical minimum level. Malnutrition debilitates entire populations in many parts of the world. It predisposes to disease and death by contributing to prematurity and low birth weight and by impairing immune processes; disease in turn exacerbates the effects of malnutrition by inhibiting the absorption of nutrients. Moreover, in some countries malnutrition is severe enough to be listed as a primary cause of death among children under five. And in times of famine starvation kills hundreds of thousands of people of every age.

The major direct cause of hunger is of course poverty; infections and parasites, poor distribution and sanitation and a rate of population growth that increases demand more than supply are contributing factors. The interplay of these factors perpetuates malnutrition, disease and in turn poverty.

- oOo -

If the poverty of nations and individuals is the root cause of miserable living conditions, why not concentrate on relieving poverty, to some extent redressing the imbalance between the rich and the poor regions of the world? Certainly a good argument can be made that the institution of a new international economic order would in time raise the level of health in the underdeveloped countries. The association between indicators of material wealth and of health status has been demonstrated time and time again; it is implicit in some of the statistics I have cited. To an extent history reinforces the development-first argument. The improvement in health standards that began in western Europe and the US in the 19th century owed more to rising living standards than to medical care as such. Death rates began to drop in northern Europe early in the 19th century, long before medicine could cure or prevent many diseases. The incidence of cholera and typhoid fell in Britain long before there were effect methods of treatment. In the US the tuberculosis death rate dropped from 200 per 100 000 of population in 1900 to 70 in the 1930s, before lung-collapse therapy or even rest in sanatoriums was widely prescribed; the rate had declined to 30 per 100 000 before a definitive chemotherapy became available during the 1950s.

I do not think, however, that the underdeveloped world can wait for economic development to have its slow effect, with health as a by-product. The first reason is that the promotion of better health is a moral imperative in itself. I would argue, moreover, that it is the ideal lever and carrot for development. Good health is a fundamental goal of people everywhere in the world, and it always has been. Even people living below the subsistence level voluntarily devote substantial effort and resources to obtaining health support in the form of meaningful remedies or of placebos, traditional or modern. Moreover, the idea that people deserve decent health is generally accepted by policy-makers: health aspirations are less controversial politically than most other social and economic aspirations. Finally, in spite of the correlations between development and health status, a number of countries have shown that providing essential health care for the total population and improving the nutritional status of all the people can have a marked effect on life expectancy and other health indicators even in the absence of general or industrial economic development.

If health is accepted as a major goal in its own right and as a major lever for economic and social development, what is to be done? The task is formidable. Most of the people of the world now have no access to any organized form of health care. The gap between levels of investment in health care in the affluent countries and in the developing countries is widening. Government spending for health in many underdeveloped countries is less than 1% of the gross national product and it seldom exceeds 2% of the GNP in any of them, compared with from 6 to 12% of the GNP in most developed countries. This translates into an average of a few dollars per person per year in the underdeveloped countries as opposed to several hundred dollars in most developed ones. To make matters worse, much of the spending is for services that reach only a small fraction of the population.

The equitable distribution of health resources is basic to raising the general standard of health in any country; for a poor country with limited funds in particular it is essential to allocate those funds preferentially to the most deprived people. This implies proper choices not only among geographic and demographic sectors but also among forms and techniques of health care. The failure to reach the majority of the people can be attributed first to inaccessibility. Rural populations are spread thin in most underdeveloped countries, and transportation is lacking. Hospitals are completely beyond reach for most people, and even scattered dispensaries are usually patronized only by people in their immediate vicinity. Well organized community healthy delivery systems are required, with people and community health workers interacting and with links to and from more central health facilities.

Yet in many poor countries a major share of the health budget has been devoted to building hospital complexes that are often difficult to run because annual operating funds or management skills are lacking. More money has gone to establish medical schools, which train physicians who are reluctant to turn their attention from advanced medical research and high technology to the basic needs of the population. None of this is surprising: the underdeveloped countries, their elites and their medical establishments are simply following the example of the developed world. A few years ago WHO's Executive Board reported that "widespread dissatisfaction among populations about their health services ... occurs in the developed as well as in the Third World", in particular because of "an inability of the health service to deliver a level of national coverage adequate to meet the stated demands and the changing needs of different societies, ... rapidly rising costs without a visible and meaningful improvement in service and a feeling of helplessness on the part of the consumer, who feels (rightly or wrongly) that the health services and the personnel within them are progressing along an uncontrollable path of their own, which may be satisfying to the health professions but which is not what is most wanted by the consumer".

Far too many of the world's medical schools prepare doctors not to care for the health of people but to cure diseases, and to do so by the application of increasingly expensive medical technology. They prepare doctors to deal with less common clinical conditions rather than with the common health problems of the community, to look at disease episodes rather than at the whole individual and his or her interaction with society. Medical systems, and in many countries the insurance systems that help to support them, are oriented toward inpatient hospital care rather than outpatient care, home care and self-care. Much of the admired technology is essentially "placebo" technology. I include in that category not only the prescription of many drugs currently in vogue but also the indiscriminate resort to coronary by-pass surgery, intensive care units, "life support" systems, whole-body scanners and so on. In the name of "quality" medical care perhaps 80% of the world's heath resources are being applied to fewer than 10% of the world's health problems.

- oOo -

In 1977 the annual World Health Assembly resolved that the main social target of governments (and of WHO) in the coming decades should be "the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life" - a goal that is encapsulated as "health for all by the year 2000". In 1978 an international conference sponsored jointly by WHO and the UN Children's Fund at Alma-Ata in the USSR identified primary health care as the key to achieving health for all by the year 2000.

As the declaration of Alma-Ata put it, primary health care is "essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination". It addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services. It includes at least education about health problems and their control, promotion of food supply and proper nutrition, safe water and basic sanitation, maternal and child care including family planning, immunization against major infectious diseases, control of endemic diseases, appropriate treatment of common diseases and injuries and the provision of essential drugs.

The delivery of primary care, thus defined, is now officially the agenda for WHO and its Member States. Four principles underlie the concept of primary care: a multisectoral approach, community involvement, equitable distribution and appropriate technology.

The multisectoral approach is dictated by the varied elements of primary care and the different activities and facilities required to implement them. Medical care and education by doctors, nurses and a broad range of auxiliary workers are only part of the story, public health functions another part. Food production and distribution, a safe water supply, adequate transportation to health facilities, decent housing and sanitation can be supplied only through the joint efforts of many different sectors. Health considerations need to be integrated into all aspects of development. To take one example, when an irrigation system is built in an arid region where certain epidemiological factors prevail, people need to be educated by health personnel about the danger of schistosomiasis; if they are to be kept from doing their wash or bathing in the irrigation ditches, alternative facilities must be provided.

The involvement of individuals in promoting their own health and community involvement in allocating health resources are also essential. People want to feel well and keep well; they have notions about what health is and how to attain it. The value of self-care has long been underestimated by the medical professions. Given the right information, people can be influenced to avoid unhealthful behaviour, whether it is smoking or chewing betel nut or abandoning breastfeeding for powdered-milk preparations mixed with contaminated water. Health education programmes are therefore an important part of primary care. Involvement also means having a role in selecting health goals and priorities. Even in affluent, sophisticated societies people are puzzled by medical mysticism and resentful of medical elitism. Rural inhabitants of developing countries are all the more suspicious of strangers who come with take-it-or-leave-it health packages, or promulagate rules and enforce practices that conflict with traditional beliefs, or establish arbitrary goals that do not coincide with local priorities. A programme for "health care" in the abstract means little. In a given community one chicken per family may make more sense, then a water supply within 10 minutes' walking distance instead of an hour's, then vaccination against measles and perhaps only then family planning instruction and a dependable supply of contraceptives.

I have already discussed at some length the necessity of equitable distribution. In developing countries (as in any country) that means getting the health care dispersed into the farthest reaches of rural areas and into the foulest depths of urban slums - to precisely those people who have the least political and economic force with which to assert their claim. It means resisting pressures for excessive spending on services that reach only a few and instead allocating funds preferentially to those in most need. It means developing a broadly based pyramidal health system, in which as many services as possible are provided as near people's homes as possible but in which each level of care is closely supported by a higher level to which patients can be referred (and to which they can somehow get). Equity also demands better international distribution of resources for health. It is not likely that rich nations will skimp on their CT scanners or even cut back on their unnecessary surgery to provide money for training community health workers in the Third World, but world interdependence requires that they help to provide some of the funding and equipment the less developed countries will need if they are to deliver primary care to all their people.

- oOo -

The principle of appropriate technology, properly understood, is crucial to the success of any health system. It is often misinterpreted. "Appropriate technology" for the underdeveloped world does not mean "small is beautiful"; it is not a prescription for cheap, primitive technology for poor, primitive people. It calls instead for scientifically sound materials and methods that are socially acceptable in a particular context, directed against relevant health problems and effectively delivered, by affordable systems, where they are most needed. The generation of appropriate technology is not easy: often it calls for the highest scientific sophistication and perceptiveness.

Take my own experience in tuberculosis. When I went to India for WHO in the 1950s, the standard treatment was rest in a sanatorium; chemotherapy was just being developed. India had some three million tuberculosis cases and no possibility of treating them in sanatoriums or hospitals. It was necessary to experiment: to develop an appropriate technology. The tuberculosis centre in Madras developed the concept of intermittent home-based treatment with such drugs as isoniazid. It turned out that a course of treatment providing a 95% cure rate would cost so much that it was better to adopt a regimen providing about an 85% cure rate for 100 times as many patients. The function of WHO was to give the Indian authorities courage to adopt a regimen that would have been unacceptable in richer countries. Madras standardized diagnostic procedures, proved the effectiveness of chemotherapy administered in the home and devised a course of treatment that was eventually certified by a WHO expert committee.

Appropriate technology is often simple technology but it is not simple-minded. One of the key inventions leading to the recent eradication of smallpox was a small bifurcated needle that administered just the right small dose of vaccine much more effectively than fancy jet injectors. Another example is the treatment of diarrhoeal diseases by rehydration with solutions of simple chemicals. Trials in Mexico began in district rehydration centres, but they were expensive, required specialized personnel and were dependent on transportation systems. Further research developed a packet for preparing solutions that could be administered in the home by anyone. It was equally effective, much cheaper and locally acceptable.

"Appropriate" implies cost-effective. The Prime Minister of one of the underdeveloped countries recently asked WHO to provide a computer-assisted whole-body scanner. I pointed out that this would absorb WHO's entire budget for his country for two years; for the same amount of money his country could immunize all children against measles for 10 years, thereby saving the lives of perhaps 500 000 children. The President of another country, concerned about malaria, wanted help for a campaign against the mosquito vector. A vector control campaign can be effective but it takes time; the thing to do right now to prevent the death of 100 000 children a year in his country is to get inexpensive malaria control pills to everyone suffering from the disease or exposed to it.

- o0o -

Can primary care strategies make any difference or will they have the same fate as many earlier well meant but ineffective efforts? Most of the evidence in their favour has been intuitive or circumstantial. One would like to conduct some broad, carefully controlled tests. Agricultural extension services might be provided, for example, to two groups of about a million people each, with a small proportion of the funds allocated in one case to primary health care. Would the effects of health care be reflected in yields per hectare? I believe they would be, but an experiment of this kind would be difficult, expensive and time-consuming, and there is no time to wait.

A recent analysis of more limited studies, however, shows encouraging results. Davidson R. Gwatkin, Janet R. Wilcox and Joe D. Wray of the Overseas Development Council examined the results of 10 experimental projects, covering from 2000 to 65 000 people each, designed to improve health and nutrition essentially in ways supported by the Alma-Ata Declaration; the projects had been carried out in various settings on four continents over the past 25 years.

Their annual cost was low: from 80 cents to $7.50 per person covered, or from about 0.5% to 2% of the per capita GNP of the countries involved - close to the level of health expenditures reported for most developing countries. The basic finding is that the projects worked, specifically in lowering infant and child mortality; in some cases children's physical growth rates were also increased or a high fertility level was reduced. The ODC report shows how people can be helped to extricate themselves from the vicious circle of poverty, disease, malnutrition, high death rates and family growth in excess of family economic capacity.

- o0o -

That brings me, at what I take to be the right stage of this discussion, to the subject of fertility rates, which is both more meaningful and more tractable when it is examined at the level of the individual family than when it is viewed as a global "population problem". Family planning and excessive fertility would be of concern to health planners even if there were no relation between fertility and development. As a result of high birth rates children under 15 now account for about 40% of the total population of the less developed countries, compared with less than 25% in the more developed countries. Children are particularly susceptible to many diseases prevalent in poor societies, and so the death rate increases. Large families are harder to feed on a subsistence income. Crowding in unsanitary housing spreads communicable diseases. Above all, high fertility increases maternal illness and mortality. Inadequate spacing of births puts a heavy burden on women, and there is a steady increase in death at childbirth after the third birth. High fertility also increases resort to illegal abortion, which carries grave health risks. Such reasons would be enough to account for the inclusion of family planning as a necessary component of primary health care quite apart from any development considerations.

Development is, however, affected by population growth. As the World Population Plan of Action adopted at Bucharest in 1974 put it, "population variables influence development variables and are also influenced by them". Country after country has seen painfully achieved increases in total output, food production, health and educational facilities and employment opportunities reduced or nullified by excessive population growth. Most underdeveloped countries therefore seek to limit their population growth: a UN survey in 1976 showed that 54 countries accounting for 82% of the developing world's population considered their fertility levels too high. Recently there have been signs of some success in lowering those levels. After increasing exponentially for some years, the world's population growth rate seems to have peaked at about 2% per year between 1960 and 1965. The growth rate is now about 1.7%, and a UN projection suggests that current trends will bring it to less than 1.6% by the year 2000. The continuing World Fertility Survey indicates that in many underdeveloped countries women's expressed desire to have fewer children is now being reflected in lowered fertility. China, with more than a fifth of the world's population, is engaged in a massive fertility control campaign that has sharply lowered its birth rate in less than 10 years.

Yet the rate of population growth in the less developed countries is still about 2% per year; at current rates of increase almost two billion people will be added to the world population by the end of the century, nearly as many as were added between 1950 and 1980. More than 90% of the increase will be in the underdeveloped countries, whose population alone in the year 2000 will be nearly twice that of the entire world of 1950; about 80% of the world's population will then be living in the underdeveloped countries. Quite aside from mere numbers, rapid growth in developing countries drives poor people from rural areas to cities. In 1980, 16 of the world's 26 cities with more than five million inhabitants were in developing countries; by the end of the century 45 of the world's 60 cities of that size will be in developing countries. People flock from the countryside to urban slums in search of jobs and better services. The best way to curb this trend is to bring economic opportunity and services - including health care - to the rural areas.

The underdeveloped countries cannot shed their excess population to colonies or North America as the industrialized countries of Europe could when they were passing through a comparable demographic phase. And in many cases tradition and lack of services have hampered the ability of women to limit their families even when they wanted to. In response to the very real negative impact of excessive fertility on individuals and individual countries and to the more dramatized fear of a world "population explosion", efforts to spread the message of family planning through the developing countries have proliferated in the past 25 years. In some cases well-meaning technocrats made misguided attempts to sell a technological solution to unwilling villagers; sometimes the technology was experimental and not demonstrably safe, and sometimes this extremely sensitive subject was addressed without consideration of local customs and beliefs.

The Bucharest conference recognized formally that "all couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so". The Alma-Ata Declaration included family planning as part of the maternal and child care component of primary health care. The message of family planning and the means to accomplish it are best delivered not by a central government but by local health workers who have gained the confidence of local people. They should suggest a range of techniques rather than a single government-prescribed method, and the techniques should be safe, effective and socially acceptable. The lesson of recent years is that virtually wherever health care facilities have been made available, women have demanded information and the necessary materials for spacing their children and limiting their families. Better health motivates family planning. Moreover, the delivery of family planning services along with health care can provide an entry to the acceptance of other health services, and of development measures in general, in particular by mobilizing women to take increasing control of their own lives.

- oOo -

I insisted at the outset that health must be a goal in its own right. It is also a primary lever for development; health is for people, by people - and people are both he subject and the object of development. Health is also primary in a hardheaded political sense because the attainment of health is a relatively unexceptionable goal. The rich countries that can provide the relatively small amount of funds (as well as the skills and scientific knowledge) the poor countries will continue to need in order to promote health must recognize, among other things, that many Third World health projects return large benefits to affluent countries. The eradication of smallpox, to take one example, is saving the affluent countries billions of dollars in vaccination, surveillance and quarantine costs. Smallpox eradication was not the most important health need in the poor countries, in some of which hundreds of thousands of children die of malaria every year. It was undertaken because it was important to worldwide health, and it illustrates the interdependence of all the world's people when it comes to health problems and their solution.

So far I have concentrated on people in developing countries. This does not mean that all is well in developed countries. If most of the ill health in developing countries results from poverty and deprivation, much of it in the developed countries results from abundance and consumerism. The health problems of people in these countries are all too often the consequence of oversmoking, overeating, overdrinking, overdriving, overuse and abuse of drugs, overpollution of the environment and alienation in gigantic urban agglomerations. Moreover, the health systems of the developed countries are too costly. If the costs are not curbed, even the richest countries will not be able to maintain their advanced medical technology and at the same time to provide essential health care for all segments of the population.

At a recent symposium on health for all in the developed countries the US presented preliminary ideas on its strategy for attaining that goal for its people by the year 2000. The report stated that "behavioral risk factors are today some of the leading causes of unnecessary death and disability in the US ... Risks in the physical environment include contamination of air, water and food; workplace hazards; radiation exposure; excessive noise; dangerous consumer products; and unsafe highway design. Risks in the socioeconomic environment which affect health include income level, housing and employment status, family ties and social supports. ... People need health education and information to choose healthy lifestyles and to make effective use of available services. Social pressures and many kinds of advertising can support or discourage such choices".

The report continued: "Lack of access to effective services which promote, maintain or restore health is associated with more frequent and more severe illness ... 49 million Americans live in areas officially designated as medically underserved, 22 million in urban areas and 27 million in rural areas; 14.9 per cent do not have a regular source of medical care; 20 to 25 million Americans have no health insurance; and 19 million Americans have inadequate health insurance coverage. An additional 46 million Americans have inadequate insurance against large medical bills. Almost half of all individuals with incomes below the Federal poverty level are not covered by Medicaid".

The US health for all strategy includes measures to prevent disease and promote health, including immunizations for all children and programmes to deter smoking and prevent alcoholism. The strategy also aims at ensuring access to services for all Americans by eliminating current barriers. Health research is to be oriented not only toward the discovery of fundamental knowledge but also toward applying that knowledge to clinical practice and developing better ways of organizing and financing health services. Finally, health surveillance is proposed in order to identify gaps in the health system, with a view to responding to them so that those at risk and in need receive priority, in conformity with the equity principle of health for all.

I know of no country that can be complacent about its health situation and health system, just as I know of no country that can be complacent about its human development level. Human development implies progressive improvements in the quality of life. Without health life has little quality; even if health is not everything, without health the rest is nothing. I am saying nothing new. Some 2500 years ago Heraclitus recognized that health is fundamental to human wellbeing and development when he wrote: "When health is absent, wisdom cannot reveal itself, culture cannot become manifest, strength cannot fight, wealth becomes useless and intelligence cannot be applied".

HOLISTIC MEDICINE: FROM PATHOLOGY TO PREVENTION[a]

by
Kenneth R. Pelletier

Since the Middle Ages humankind has been divided into separate aspects of body, mind and spirit. This split is still evidenced in the present structure of the healing professions. Physicians are dedicated to the treatment of the body; psychologists and psychiatrists are concerned with treating the mind, and yet a third group, the clergy, is attendant to spiritual healing. Such fragmentation and specialization is a relatively recent phenomenon. More unified concepts of health and disease extend further back to the roots of medicine in the late Assyrian civilization, and in the Greek culture as exemplified in the writings of Hippocrates and Aristotle, who clearly observed the effects of emotions on physical disease. Despite this early principle of a psychosomatic dimension inherent to medicine, Coulter's (1) three-volume work, Divided legacy, has traced a progressive division between body, mind and environment characteristic of the rationalist school as contrasted to a more integrated or empirical approach. Within the healing professions today, there is a re-emphasis on the empirical school characterized by such a holistic approach to each person. Holistic medicine addresses biological, psychosocial and environmental factors, emphasizing prevention of disease and maintenance of optimum health rather than solely the treatment of disease.

Throughout the history of medicine, practitioners have puzzled about the seemingly inexplicable recovery of mortally ill patients and the sudden morbidity of patients who should have fully recovered. Beginning as early as the 19th century, the French neurologist Charcot explored the psychosomatic causes of hysterical seizures. This research was followed by that of Freud, Jung, Sherrington, Dunbar, Pavlov, Cannon, Selye and others who began to define the precise neurophysiological mechanisms and biochemical mediators by which psychological states and environmental influences held profound sway over the body. Most recently, cardiologists Friedman & Rosenman (2) defined the type A personality predisposed toward cardiovascular disorders, and there has been a resurgence of research, as noted in Science, to study possible psychosomatic factors involved in cancer (3). Among the most striking research is a longitudinal, prospective study of 1337 medical students by Thomas (4). Her research, spanning 1948 to 1964, focused on the prospective personality profiles which were to correlate later with suicide, mental illness, hypertension, coronary heart disease and malignant tumours. From the longitudinal data, the pathogenic personalities that emerged as most distinct were those of students in whom malignant tumours later developed. While issues of causality require further research, factors such as stress and psychosocial influences cannot be dismissed in any comprehensive inquiry.

---

[a] This article was published in Orthodox medicine, humanistic medicine and holistic health care - a forum. Western journal of medicine, 131: 481-483 (1979).

There is no inherent antagonism between purely biomedical approaches to health and disease and the consideration of psychosocial influences characteristic of holistic medicine. In a most concise article, Engel (5) proposed such an integration as the basis for "a new medical model" with responsibilities shared equally among diverse health professionals and patients.

In moving from basic research issues to institutional considerations, Knowles (6) has described the present situation most succinctly:

> I believe the idea of a "right" to health should be replaced by that of a moral obligation to preserve one's own health. The individual then has the "right" to expect help with information, accessible services of good quality, and minimal financial barriers. Meanwhile the people have been led to believe that national health insurance, more doctors, and greater use of high-cost, hospital-based technologies will improve health. Unfortunately, none of them will.

These beliefs have been reiterated by McNerney, Dubos, McKeown and Saward, and Ingelfinger (7) who estimated the capacity of purely biomedical approaches to achieve health for the population as "marginally on the positive side of zero". Basic research, health practitioners and health care institutions have reached the limits of a purely biomedical, technological approach to health care and need to extend their efforts to include holistic medicine.

Complex issues cannot be adequately addressed here but it is possible to provide a brief list of the innovative areas characteristic of holistic medicine. Many items have been noted in the Health of Canadians issued by Lalonde (8) when he served as the Minister of Health in Canada. Holistic medicine is characterized by the following.

1. Health is not a subspecialty of medicine but requires cooperative efforts of physicians, psychologists, environmentalists and other persons working together on an equal basis (9,10).

2. Preventive care with an emphasis on health maintenance can be shown to be cost-effective (11,12).

3. Methods of maintaining health are the prerogative of each person and his or her lifestyle rather than of medicine *per se*, and the subsequent model is one of education rather than of diagnosis and treatment of disease (13).

4. Psychosocial and biochemical factors are weighted equally with an emphasis on etiology (5,14).

5. An awareness of one's bodily and mental states and the factors affecting them is critical in determining the balance between health and illness (15), and life and death (16).

6. Optimum health is based on the management of stress (17,18), as well as on dietary and nutritional factors (19), regular physical activity (20) and a sound physical (21,22) and psychosocial environment.

7. Self-regulatory methods founded on empirical research indicate the capacity of persons to become responsible participants in the healing process through clinical biofeedback (23), autogenic training, Jacobson's system of progressive relaxation and meditation (24).

8. Use of terms such as placebo response (25) (shown to elicit a biochemical response (26)), spontaneous remission and psychosomatic tend to dismiss major factors in health care which need to be researched in greater depth.

9. With the elimination of all disease, human life expectancy would be increased by perhaps ten years, and further research needs to explore the biologic potential which is considerably longer (27,28).

10. Health is approximately 90% dependent on the above factors which are beyond the province of biomedical technology as noted by McKeown (29), Illich (30), Palmer and many analysts.

If the prevention of disease and the attainment of optimum health are the ultimate goals of the health professions, then holistic medicine requires the equal responsibility and cooperation of the public, health practitioners and institutions.

Many of these issues and references are explored more systematically in Mind as healer, mind as slayer (18) and in Holistic medicine (31). At present, holistic medicine is more suggestive of a direction than an accomplished fact. Humanitarian concerns amidst the proliferation of biomedical technology and economic imperatives issued by the Federal Trade Commission (32) and Blue Cross have converged to create the necessity of a profound evolution in health care. For Hippocrates, Aristotle and Paracelsus physis represented an innate healing capacity to be elicited and sustained for optimum health. Holistic medicine is a relatively recent manifestation consistent with this fundamental quest of all humankind.

REFERENCES

1. Coulter, H.J. Divided legacy - a history of the schism in medical thought. Vols 1, 2 & 3. Washington, DC, Wehawken Book Co., 1977.
2. Friedman, M. & Rosenman, R.H. Type A behavior and your heart. New York, Alfred A. Knopf, 1974.
3. Holden, C. Cancer and the mind - how are they connected? Science, 200: 1363-1369 (1978).
4. Thomas, C.B. & Duszynski, K.R. Closeness to parents and the family constellation in a prospective study of five disease states - suicide, mental illness, malignant tumor, hypertension and coronary heart disease. Johns Hopkins medical journal, 134: 251-270 (1974).
5. Engel, G.L. The need for a new medical model - a challenge for biomedicine. Science, 196: 129-136 (1977).
6. Knowles, J.H. The responsibility of the individual. Science, 198: Masthead page (1977).
7. Ingelfinger, F.J. Health: a matter of statistics or feeling (Review of the role of medicine: dream, mirage, or nemesis by Thomas McKeown) (editorial). New England journal of medicine, 296: 448-449 (1977).
8. Lalonde, M. A new perspective on the health of Canadians. Ottawa, Ministry of National Health and and Welfare Information, 1975.
9. Breslow, L. A quantitative approach to the World Health Organization definition of health, physical, mental and social wellbeing. International journal of epidemiology, 1: 347-355 (1972).
10. Carlson, R.J. The end of medicine, New York, John Wiley & Sons, 1975.

11. Kristein, M.M. et al. Health economics and preventive care. Science, 195: 457-462 (1977).
12. Farquhar, J.W. The American way of life need not be hazardous to your health. Stanford, CA, Stanford Alumni Association, 1978.
13. Ng, L.K.Y. et al. The health promotion organization - a practical intervention designed to promote health living. Public health report, 93: 446-455 (1978).
14. Saward, E. & Sorensen, A. The current emphasis on preventive medicine. Science, 200: 889-894 (1978).
15. Cousins, N. Anatomy of an illness - as perceived by the patient. Saturday review, 4-51 (1977).
16. Simonton, O.C. et al. Getting well again. Los Angeles, J.P. Tarcher, Inc. 1978.
17. Selye, H. The stress of life. New York, McGraw-Hill, 1956.
18. Pelletier, K.R. Mind as healer, mind as slayer - a holistic approach to preventing stress disorders. New York, Delacorte and Delta, 1977.
19. Ballentine, R. Diet and nutrition - a holistic approach. Honesdale, PA, The Himalayan International Institute, 1978.
20. Cooper, K.H. The aerobics way. New York, M. Evans and Co., 1977.
21. Becker, R.O. Boosting our healing potential. In: Science yearbook, Chicago, World Book Encyclopedia, 1975, pp. 40-55.
22. Randolph, T.G. Specific adaptation. Annals of allergy, 40: 333-345 (1979).
23. Biofeedback and self-control (Annual). Chicago, Aldine Publishers, 1970-1978.
24. Bloomfield, H.H. & Kory, R. The holistic way to health and happiness. New York, Simon and Schuster, 1978.
25. Benson, H. & Epstein, H.D. The placebo effect - a neglected asset in the care of patients. Journal of the American Medical Association, 232: 1225-1227 (1975).
26. Levine, J.D. et al. The mechanism of placebo analgesia. Lancet, 2: 654-657 (1978).
27. Leaf, A. Youth in old age. New York, McGraw-Hill, 1975.
28. Finch, C.E. & Hayflick, L. The biology of aging. New York, Van Nostrand Reinhold, 1977.
29. McKeown, T. The role of medicine - dream, mirage, or nemesis. London, Nuffield Provincial Hospitals Trust, 1976.
30. Illich, I. Medical nemesis - the expropriation of health. New York, Pantheon, 1976.
31. Pelletier, K.R. Holistic medicine - from stress to optimum health. New York, Delacorte and Delta, 1979.
32. FTC gaining allies in attack on MDs. Medical world news, 13 (1979).

THE VALUE OF MEDICAL CARE FOR HEALTH PROMOTION[a]

by
Milton I. Roemer

Introduction

Since the mid-1970s, there has been a kind of rediscovery of prevention in the United States, Canada, and other industrialized countries, due to expanding epidemiological knowledge about factors contributing to noncommunicable chronic diseases, and to the mounting complexities and costs of medical treatment, among other things. The new emphasis on prevention in America has pushed aside the controversial issue of national health insurance (NHI), with its implication of higher governmental expenditures and more regulation.

In developing countries, where elementary environmental sanitation is still grossly deficient, the priority for prevention has long been recognized by health leaders (although not necessarily acted upon). In the United States, however, the recent tendency to counterpoise prevention to medical cafre, heralding the value of health promotion while denigrating the wastefulness of treatment, creates a false dichotomy. In affluent industrialized countries, any sharp line between prevention and treatment is unsound. Both in theory and practice, prevention and medical care reinforce each other.

This paper will attempt to show the importance of integrated prevention and medical care in the health policy formulation of all countries, but especially in the modern industrialized countries. It will discuss: (1) the reasons for the recent denigration of medical care, (2) the great achievements of prevention, (3) the benefits of modern medical care, (4) the specific value of medical care for disease prevention and health promotion, and (5) the implications of this analysis for policy in national health care systems.

The denigration of medical care

Scepticism about the value of medical care became prominent in the mid-1970s, in large part as a reaction to the rising complexities of medical technology (both diagnostic and therapeutic) and the mounting costs of its use. In its more extreme form, this was articulated by Ivan Illich, a former priest (1), and Rick Carlson, a lawyer (2). Illich went so far as to claim that physicians usually did more harm than good.

---

[a] This article was published in American journal of public health, 74(3): 243-248 (1984).

A preference for "natural" over artificial methods of health service and health maintenance has been asserted by many people for years. It was reflected in the early opposition to immunizations, to the pasteurization of milk, and the chlorination of water supplies, and it is still seen in the opposition by some people to water fluoridation for reducing dental caries. Homeopathy arose in opposition to the copious use of drugs in nineteenth century medicine, and chiropractic - acclaimed as "drugless healing" - arose in reaction to any use of drugs (3). But when the man-made technology became more and more expensive, with sometimes uncertain evidence of benefits, the arguments against it intensified (4).

The whole value of clinical medicine, in contrast to the importance of good living conditions, has long been forcefully questioned by public health leaders and scholars. Thomas McKeown has shown that in England the infant mortality rate and mortality from tuberculosis began their declines in the early nineteenth century, long before the discovery of the microorganisms that caused these deaths and the development of public health and medical strategies to combat them (5). In 1790, Johann Peter Franck had spoken of "the people's misery" or poverty as the "mother of diseases" (6). René Sand, the great Belgian scholar of social medicine, wrote in 1936 of how the achievements of public health dwarfed those of individual physicians (7). In 1944, C.-E.A. Winslow - reacting to extravagant claims of the American Medical Association - showed that the great reduction in American death rates between 1900 and 1940 was "due predominantly to public health programs rather than clinical medicine" (8).

In spite of the modest past accomplishments of medical treatment, relative to those attributable to improved living standards and public health programmes, the rising expenditures for medical care have become increasingly conspicuous. In the United States, where such data have been collected for over 50 years, national expenditures for all health purposes rose from $3.6 billion in 1929 to $247.2 billion in 1980, an escalation from 3.5% of the gross national product (GNP) to 9.4% (9). The slope of the expenditure curve became especially steep after 1950. Furthermore, about 92% of this expenditure was for medical care, and hardly 3% for organized public health activities.

By 1970, the costs of medical care were rising so rapidly that proposals for national health insurance (NHI), quiescent since 1950, arose from many quarters (10). But other issues took precedence, and by the time of the Carter Administration, 1976-1980, the NHI issue receded before charges that it was "too expensive". Raising the banner of prevention, therefore, coincided very nicely with the retreat from NHI; presumably, it was both cheaper and better. Even the conservative medical establishment joined in the rediscovery of prevention. Why should the nation's whole system of medical care be assaulted, when social improvements to promote health would be less costly and more effective? In the words of a leading US medical spokesman in 1976:

> It is one of the great and sobering truths of our profession that modern health care probably has less impact on the health of the population than economic status, education, housing, nutrition, and sanitation ... yet knowing that, I think we have fostered the idea that abundant, readily available, high quality health care would be some kind of panacea for the ills of society and the individual. That is a fiction, a hoax ... (11)

Public action for improving economic access to personal medical care, one would infer, was really not so important.

Within the enormous US expenditures for medical care, the largest and also the most rapidly growing segment was for patient care in hospitals. In 1950, hospitals had absorbed 30.4% of the the total spending, rising to 40.3% in 1980. If nursing home costs are added, institutional expenditures amounted to 48.7% of the total in 1980, not including the services of doctors to bed patients (9). One can appreciate why so much of the mounting scepticism about medical care has been focused on hospitals, where high costs and high technology come together.

Hospitals are also the places where doctors perform surgery, for much of which the justification is being questioned. Several studies have shown that rates of surgical operations vary directly with the local ratio of surgeons to a population, more than with evidence of health need (12,13). When the doctor's financial incentives are changed from fee-for-service to salary, as in health maintenance organizations (HMOs), the rates of elective surgery invariably decline; yet the predominant evidence indicates that the quality of care in HMOs and the health record of HMO members are superior to these indicators in the private medical market (14). High costs aggravate the discontent of patients not cured by surgical intervention; in back of most of the numerous malpractice suits in America, one nearly always finds an angry patient (15).

In developing countries, the imbalance of health resource allocations for hospitals, in contrast to public health programmes, is particularly striking (16). Yet in these countries the enormous burden of preventable disease should favour the highest priorities for prevention and primary care. This policy is constantly promoted by the World Health Organization (17). And although it is all too seldom followed, the WHO emphases on "appropriate technology", "primary health care", and "community participation" underscore the worldwide advocacy of prevention in preference to medical care.

The achievements of prevention

The massive achievements of improved environmental sanitation and communicable disease control in extending life expectancy in industrialized countries are well known. Reductions in the mortality of infants and small children have been most important, but the near-conquest of tuberculosis in the industrialized countries has contributed substantially to lower mortality in the adult years. The burden of physical disability was greatly reduced by development of immunization against poliomyelitis in 1954. Greater knowledge of nutrition, along with school feeding programmes, social insurance pensions, and public assistance for the poor, have almost eliminated the diseases of hunger in the industrialized countries.

In the place of death and disability from infectious disease, the major problems in the developed countries became the chronic noncommunicable disorders (18). The potentialities of preventing these diseases are increasingly appreciated. The periodic health examination has adjusted itself to the demographic distribution of disease in populations (19). Mass examinations for syphilis and tuberculosis have been supplemented by blood glucose determinations for diabetes, ocular tonometry for glaucoma, Papanicalaou smears for cervical cancer, etc. In America, combinations of these tests in "multiphasic screening" programmes became a strategy for prevention (20). Even though the general concept has not been accepted universally (21), the value of early disease detection has been demonstrated for various disorders.

In the 1950s, the relationship of fat consumption to arteriosclerosis and coronary artery disease was shown by Ancel Keys and others (22). The exact mechanisms are still under study and debate, but there has developed a wide consensus that saturated fats - along with lack of exercise, cigarette smoking, and stress - are "risk factors" in the genesis of cardiovascular disease. As early as 1938, Raymond Pearl reported on the negative statistical relationship between smoking and longevity (23) and in the early 1950s Richard Doll produced convincing evidence of the causal role of tobacco in lung cancer (24). The pathogenic role of alcohol consumption in cirrhosis of the liver had long been known, and its contribution to serious automobile accidents has become gradually more prominent.

These and other epidemiological findings provide increasingly firm foundations to a strategy for preventing the major causes of death in most industrialized countries. In 1965, Lester Breslow and colleagues began their longitudinal studies of some 7000 adults in one California county, showing the relationship of "health habits" (dietary practices, smoking, drinking, sleeping, etc.) to mortality (25). In 1974, the Annual Report of the Canadian Minister of National Health and Welfare, Marc Lalonde, attracted worldwide attention in calling for changes in human behaviour as the heart of a "new perspective" for improving health (26). By the late 1970s, everyone was speaking of the importance of "lifestyle" for good health. The US Surgeon General summarized the accumulated knowledge in a 1979 Report on Health Promotion and Disease Prevention (27).

The ecology movement of the 1960s gave further impetus to the rediscovery of prevention. Increasing air pollution in the large cities, stream pollution from industrial wastes, the international issues of nuclear bomb tests and radioactive fallout - all these problems led to a fresh appreciation of the importance of a clean environment (28). The anti-war movement of the 1960s reinforced the demands for a society free from man-made violence and the many abuses of nature by modern civilization.

By the 1980s, the momentum for an active social policy of prevention and positive health promotion was very strong. Joggers were everywhere, and exercise of all kinds was promoted for the sedentary city dweller. Cigarette packages were required by law in some 40 countries to warn of the grave dangers of smoking (29). Fat preparations in the market emphasized their composition of "unsaturated" lipids and absence of cholesterol. Laws were passed to require seat belts in automobiles, and some countries made it an offence for riders not to use them.

In the late 1970s and early 1980s, the strategies for prevention of chronic noncommunicable disease began to show an effect. While the precise explanations were elusive, certain types of cancer - such as cervical in women and stomach cancer in both sexes - had been definitely declining. When the mortality rate from heart disease in the United States was examined on an age-adjusted basis, it was found that after steady escalation it had begun to decline from 308 per 100 000 in 1950 to 208 in 1978 (9). Death rates from lung cancer, associated with smoking, continued to rise, but there was much evidence that this lethal practice was lessening, especially in adult males.

How much of the impressive decline in US cardiac mortality was due to improved medical care, however, and how much to the several preventive strategies is not clear. In the 1950s and perhaps the early 1960s, the preventive policies were not widespread, and advances in clinical cardiology may well deserve the major credit. By the late 1960s and the 1970s, perhaps preventive behaviour played the greater part. Comparison with trends in the Soviet Union suggest this inference. Between 1964 and 1975 there was an 18% increase in Soviet cardiac death rates (30), with a concomitant increase in the consumption of animal fats and of tobacco in the USSR. During this same period, US consumption of these products declined.

Even US mortality from accidents declined from 58 per 100 000 in 1950 to 44 in 1978, influenced perhaps by the global oil crisis, automobile seat belts, and lower highway speed limits. The prevalence of dental caries also declined in the 1970s, presumably as a result of fluoridation of water supplies and other forms of fluoride intake (31). Thus the achievements of prevention, quite outside the sphere of communicable diseases, were very impressive indeed.

The benefits of medical care

The demonstrable achievements of prevention, combined with the continued escalation of the costs of therapy, led naturally to political and social pressures for containment of the rising costs of medical care (32), creating an artificial dichotomy between prevention (with high value and low cost) and treatment (with low value and high cost). Unfortunately such a dichotomy not only overlooks the many benefits derived from medical care, but also ignores the great value of the medical care process as a major channel for the delivery of preventive health service.

The great extensions of US life expectancy at birth - from 47.3 years in 1900 to 73.3 years in 1978 - has been due mainly to reduction in the mortality rate of infants and small children. Mortality in the first year of life is widely recognized to reflect living conditions, but these exert their influence principally after the neonatal period (the first 28 days of life). Neonatal death rates in the United States have declined from about 45 per 1000 live births in 1915 to 9.5 per 1000 in 1978 (33), due in large part to improved handling of the childbirth process, including delivery of newborns in hospitals - a component of medical care. The abrupt decline in US infant mortality between 1965 (24.7 per 1000 live births) and 1975 (16.1 per 1000) was probably not merely coincidental with the Medicaid programme that financed care for the babies of poor families in those years.

At the other end of the life scale, at age 65, to what extent can one attribute the extension in life expectancy to preventive services or to lifestyle? Before 1960, the lifestyle strategy for prevention was hardly significant, yet United States life expectancy in 1900 at age 65 was 11.9 additional years; by 1960, it was 14.3 additional years (9), an increase of 20.2%, surely a benefit predominantly of medical care. By 1978, life expectancy at age 65 was extended an additional 2.0 years to 16.3 years. During this 18-year period (1960-1978), preventive strategies may have been mainly responsible for the extra longevity, but the medical treatment of heart disease, cancer, diabetes, pneumonia, and other diseases of old age must also have made a substantial contribution. For the years 1965-1975, a national conference, studying the decline in US cardiac mortality, could not decide how much was attributable to changes in lifestyle and how much to improved medical care (34).

Rather striking evidence of the influence of access to medical care on the mortality rates of the aged is shown in age-specific data comparing the United States and Canada (35). In 1966-1967, the age-adjusted death rate of all American women was 5.7 per 1000, compared with 5.1 per 1000 in Canada; the Canadian record was better than that of the US for all age groups. In 1966, it will be recalled, the US Medicare and Medicaid programmes went into effect, making medical service financially accessible to virtually all Americans 65 years of age and older. Financially accessible care was available to all Canadians in 1966. A decade later, in 1976-1977, the age-specific mortality rates of both populations had declined; those of US women were still higher than those of Canadian women at all specific age levels except 65-and-over. In this age group, which in the United States had been entitled to socially financed medical care for a decade, the relationship reversed and the US mortality rate became lower than that of Canada (36.0 vs 37.5 per 1000, respectively). The dynamics were less dramatic for elderly males, but in the same general direction.

When mortality rates are reduced, whether by prevention or medical care or both, one should not expect a commensurate reduction in morbidity or disability. Each additional day or year that a person stays alive, he becomes part of the population at risk for all causes of disease and injury. This simple truth is often overlooked, and yet it accounts for the rising rates of disability over time, when mortality rates are declining. The US national health Survey found that the rate of "restricted-activity days", age-adjusted, rose from 17.0 per person per year in 1974 to 18.5 in 1979 (9). For acute conditions, the incidence rose from 204 per 1000 persons per year in 1970 to 222 in 1979. These trends apply to both the young (under age 17) and the elderly (over age 65), examined separately. Prevention, therefore, does not reduce the need for medical care in the long run.

Sceptics may say that adding years to life after age 65 tells us nothing about the quality of life in those extra years. A crucial benefit of medical care, however, is precisely its impact on the quality of life - that is, on the ability of the patient to be free from symptoms, to function socially, and to be happy.

Walsh McDermott, referring to the "personal encounter physician system" in contrast to the "public health system" (36), speaks of the thousands of patients with serious heart disease who are not only kept alive, but are enabled to work and function socially by skilful medical care, patients with degenerated hip joints, who are enabled to walk again, diabetics, who cannot be cured, but can be kept alive and fully effective for decades. Tracing the trend of US age-adjusted death rates for all causes, McDermott points to the steady decline from 1900 to 1937, then the abruptly steeper downward slope for the next 20 years. During those 20 years, there was no major change in lifestyle, no major new preventive strategy, but the sulfa drugs appeared in 1937 and penicillin in 1945. Administration of these drugs, which constitutes medical care, was doubtless responsible for saving the lives of thousands of patients with pneumonia, septicaemia, osteomyelitis, and other bacterial infections that had not been prevented.

Medical care is the principal control strategy for hypertension, one of the major risk factors in cardiovascular disease and cerebrovascular accidents; medications do not cure the disease but control it so that the patient stays well. Glaucoma, one of the major causes of blindness in the industrialized countries, is treated with eye medication that does not cure the disease, but reduces intra-ocular pressure so that vision does not deteriorate. Pharmaceutical control of serious psychoses - schizophrenia and manic-depressive psychosis - has reduced the occupancy of mental hospitals enormously and has enabled thousands of mental patients to live in their home communities (37). Psychopharmaceutical therapy has also greatly reduced disability from depressive disorders - probably the commonest of all psychoneurotic afflictions.

The quality of life is admittedly difficult to measure, but there is no doubt that medical care can improve it to some extent in virtually all diseases. Much gynaecological surgery may be unjustified, but hysterectomies eliminate distressing symptoms in millions of women. The patient with rheumatoid arthritis may not be curable, but he/she can be enabled to live comfortably and to avoid getting permanent deformities. The life-saving value of emergency medical care for serious injuries is dramatized daily. The beneficial effects of primary medical care, for patients with various chronic disorders, have been quantified in terms of simple aspects of behaviour, such as improvements in locomotion, sleeping, eating, and other activities of daily life (38). Finally, one must not ignore the emotional value of medical reassurance, when this is feasible.

Perhaps the most convincing evidence of the benefits of medical care has been provided by Jack Hadley's recent analysis of mortality rates in 400 US counties. Using demographic data from the 1970 census and medical care utilization data drawn from other sources (but not the customary physician-population ratio), he concludes:

> The principal finding of this study is that medical care has a negative and statistically significant impact on mortality rates. This implies that health is better when medical care use is higher. After controlling for other factors, such as income, education, marital status, work experience, cigarette consumption, and disability, cohorts with greater estimated use of medical care appear to have lower mortality rates (for all causes of death) ... A 10 per cent increase in medical care expenditures per capita is estimated to reduce mortality rates by between 1.23 per cent (elderly white males) and 2.04 per cent (black female infants), with an average reduction of 1.57 per cent. (39)

It would seem reasonable to infer that this reduction in mortality rates, associated with medical care, implies also a corresponding improvement in the quality of living during the additional duration of life achieved.

The economic benefits of medical care should not be overlooked. Early and effective treatment of most diseases can not only reduce days of disability, but also days lost from work and the subsequent drains on disability insurance funds. Rehabilitative care has converted many invalids from welfare clients to workers who pay taxes.

The value of medical care for prevention

The linkage between prevention and treatment was emphasized years ago when Hugh Leavell and Gurney Clark spoke of four "levels of prevention": (a) health promotion, (b) protection against specific disorders, (c) early disease detection with prompt treatment, and (d) limitation of disability (40). The first level is exemplified by good nutrition, the second by immunizations, the third by screening programmes, and the fourth by rehabilitation. It would seem that many have still not understood this basic concept.

When the patient with chest pains is advised by the doctor to lose weight, exercise moderately, sleep more, and stop smoking, how much preventive service is he getting and how much medical care? When a Pap smear reveals an early cervical cancer, and prompt surgery saves the woman's life, is this prevention or medical care? The answer, of course, is "both". The competent, conscientious physician almost inevitably gives preventive service when he renders medical care.

The patient seeking help for an ailment presents the opportunity for appropriate personal preventive service. A thoughtful word from the doctor about not smoking is bound to be more effective than printed warnings on a thousand packs of cigarettes. Education on prudent changes in behaviour can be focused on the varying needs of each individual. But such prevention depends on access to medical care when needed. In developing countries, it was learned long ago that provision of treatment for people's ailments is the surest way to attract them to the health centres or health posts, where preventive services are offered (41).

In day-to-day medical care by private practitioners, however, the opportunities for prevention are only rarely exploited. The average physician is oriented to the treatment of disease, the relief of his/her patient's symptoms. Many health insurance programmes, in fact, specifically exclude payment for preventive services, since they are not an "unpredictable risk". As John Freymann has pointed out, the average doctor tends to associate prevention with government and mass collective actions; he sees his role as personal and curative (42). But this perception of the doctor's role is not inevitable. A rationally planned health care system could achieve an integration of prevention and medical care that would strengthen the effectiveness of both.

First of all, health service, both therapeutic and preventive, must be accessible to everyone. Access requires more than financial support, although such support is essential. In the majority of industrialized countries, this economic foundation has been provided through national health insurance (NHI) or equivalent public revenue programmes. Many of these programmes require stronger funding, improved relationships with providers, greater scope of benefits, and other improvements (43). In the United States, where NHI protection applies only to the aged - and far from completely for them - the need for public action to assure universal access to comprehensive health services is much greater. Judging by the experience of other nations, the very conversion of health care costs into a social responsibility sets in motion forces for achieving greater efficiency and effectiveness in the patterns of organization of health services (44).

But more than money is needed to achieve integration of prevention and treatment. Physicians and other health personnel must be taught to appreciate the importance of prevention in their relationship with every patient. Education in medicine and allied fields would require substantial revision to heighten the graduate's sensitivity, not only to health promotion and prevention, but also to the entire social and environmental setting that influences health. Continuing education should attempt to maintain this knowledge and attitude as regularly as it is concerned with advances in biomedical science.

Health facilities would also require substantial modification. If hospitals are to offer integrated care, they must be designed to furnish personal preventive service to both outpatients and inpatients, to have equipment for large-scale screening tests, to offer continuing health education to groups large and small. Ambulatory care centres should be accessible in every urban and rural area, as the major settings for integrated delivery of preventive and treatment services.

The integration of prevention and medical care involves more than health service. It calls for concern by health authorities with every person's employment, housing, nutrition, community relationships, and all the other influences on health - the perspective that WHO defines as "intersectoral cooperation". It means devoting attention to conditions in the child's school and the worker's factory or farm. Organizationally, such policies require coordination between health and other public authorities at every political level.

Within the health sector, in most countries, the organizational cleavages leading to inequalities and inequities are very great. Within government, there is needless fragmentation in the care of various population groups and disorders. Most serious is the large distinction between publicly sponsored and private-market health services. In so far as health care is a private-market commodity, its distribution is obviously based on personal wealth more than health need. If prevention and medical care are to be effectively integrated, deliberate strategies must build the whole framework of the health care system on principles of equity.

The administration and regulation of the health care system would have to be much more unified than it is in the pluralistic setting of the United States. This does not mean total centralization. Wide variations in local programme implementation should be feasible and encouraged, under a broad national heath policy. A regulatory process should be built into the system structure, instead of involving policing from the outside.

At the point of health service delivery, the changes from present patterns would be most important. There would be no reason for special "well-baby clinics" to give preventive service, while private doctors or hospital outpatient departments treated the sick child. Teams of health personnel working in health centres should be the norm for both types of service.

Every person should have a primary care doctor who serves as the gateway and guide to the whole health care system. As more is learned about the "epidemiology of health", more information, advice, and guidance could be provided to patients (45). Local health centres would have to be backed up by hospitals which must, in turn, be appropriately linked to other hospitals in a regional framework. For reasons of both economy and quality, there would have to be efficient logistics for the distribution of drugs and supplies.

With respect to environmental sanitation, it is worth recalling that in the early nineteenth century there were many accounts of poor health among Americans, particularly women and children. The common answer to the problem "was found not in public health measures but in encouraging the practice of personal hygiene ... In the main, the necessity of more exercise and suitable outdoor pastimes was emphasized" (46). It was only in the later nineteenth and early twentieth century that the importance of proper sanitation, good nutrition, and decent housing was appreciated.

Today also we must take care that we are not misled into thinking that a sound lifestyle is the main key to good health and should be sought solely through behavioural modification. For example, in 1976, John Knowles, then President of the Rockefeller Foundation, wrote: "The next major advances in the health of the American people will result from the assumption of individual responsibility for one's own health" (47). The lifestyle argument has been epitomized as "blaming the victim", which may be stretching the point too far, but it is obviously crucial to identify the social causes of unhygienic behaviour and do something about them (48). The most obvious contradiction is seen in the current psychological strategies to discourage smoking, while at the same time permitting massive cigarette advertising and subsidizing tobacco farmers.

Integrated prevention and medical care are bound to be less expensive than separate arrangements, if only because of economies of scale and savings on transportation. But most important is the practical convenience for people, the administrative efficiency, and the greater community impact of providing preventive and treatment services at the same local facilities, often at the same time (49). The customary separation of prevention and medical care in the free-market countries has been due to political, not managerial, considerations.

In summary, a health policy emphasizing prevention is sound in all types of country, but such a policy should not be regarded as antagonistic to a national programme of medical care for all. Access to treatment enhances the opportunities for prevention in countless ways. Moreover, once the major infectious diseases and malnutrition are eliminated, medical care has substantial value in extending lives and improving the quality of life. A health care system that makes integrated preventive/therapeutic health service accessible to everyone - financially, geographically, and psychologically - would have the greatest human and economic value.

REFERENCES

1. Illich, I. Medical nemesis: the expropriation of health. New York, Random House, 1975.
2. Carlson, R. The end of medicine. New York, Wiley, 1975.
3. Reed, L.S. The healing cults. Chicago, University of Chicago Press, 1932.
4. Fuchs, V. Who shall live? New York, Basic Books, 1974.
5. McKeown, T. The role of medicine: dream, mirage, or nemesis. London, Nuffield Provincial Hospitals Trust, 1976.
6. Sigerist, H.E. Landmarks in the history of hygiene. London, Oxford University Press, 1956, pp. 47-63.
7. Sand, R. Health and human progress. New York, Macmillan, 1936.
8. Winslow, C.-E.A. Who killed Cock Robin? American journal of public health, 34: 658-659 (1944).
9. National Center for Health Statistics. Health - United States 1981. Washington, DC, GPO, 1976 (DHHS Publication No. PHS 82-1232).
10. US Social Security Administration. National health insurance proposal. Washington, DC, GPO, 1976 (HEW Publication No. SSA 76-11920).
11. Cooper, T. (US Assistant Secretary for Health), quoted in report of The National Leadership Conference on America's Health Policy, Washington, DC, 29-30 April 1976.

12. Bunker, J.P. & Wennberg, J.E. Operation rates, mortality statistics, and the quality of life. *New England journal of medicine*, 289: 1249-1251 (1973).
13. Lewis, C.E. Variations in the incidence of surgery. *New England journal of medicine*, 291: 880-884 (1969).
14. Luft, J.E. *Health maintenance organizations: dimensions of performance*. New York, John Wiley & Sons, 1981.
15. Schwartz, D.H. Societal responsibility for malpractice. Health and society. *Milbank Memorial Fund quarterly*, 54: 469-488 (1976).
16. Abel-Smith, B. & Leiserson, A. *Poverty, development, and health policy*. Geneva, World Health Organization, 1978, p. 67.
17. *Formulating strategies for health for all by the year 2000*. Geneva, World Health Organization, 1979.
18. *Sixth report on the world health situation, 1973-1977. Part I. Global analysis*. Geneva, World Health Organization, 1980, pp. 37-50.
19. Roemer, M.I. A program of preventive medicine for the individual. *Milbank Memorial Fund quarterly*, 23: 209-226 (1945).
20. Gelman, A.C. *Multiphasic health testing systems: reviews and annotations*. Washington, DC, National Center for Health Services Research and Development, 1971.
21. McKeown, T. et al. *Screening in medical care: reviewing the evidence*. London, Oxford University Press, 1968.
22. Keys, A. Prediction and possible prevention of coronary disease. *American journal of public health*, 3: 1399-1407 (1953).
23. Pearl, R. Smoking and longevity. *Science*, 87(2253): 216-217 (1938).
24. Doll, R. & Hill, B. Study of aetiology of cancer of the lung. *British medical journal*, 2: 1271-1286 (1952).
25. Belloc, N.B. & Breslow, L. Relationship of physical health status and health practices. *Preventive medicine*, 1: 409-421 (1972).
26. Lalonde, M. *A new perspective on the health of Canadians: a working document*. Ottawa, Health and Welfare Canada, 1974.
27. US Public Health Service. *Healthy people: the Surgeon General's report on health promotion and disease prevention*. Washington, DC, GPO, 1979.
28. Whittenberger, J.L. The physical and chemical environment. *In*: Clark, D.W. & MacMahon, B. *Preventive medicine*. Boston, Little, Brown & Co., 1967, pp. 623-642.
29. Roemer, R. *Legislative action to combat the world smoking epidemic*. Geneva, World Health Organization, 1982.
30. Cooper, R. & Schatzkin, A. Recent trends in coronary risk factors in the USSR. *American journal of public health*, 72: 431-440 (1982).
31. Knutson, J.W. Water fluoridation after 25 years. *Journal of the American Dental Association*, 80: 765 (1970).
32. Schweitzer, S.O., ed. *Policies for the containment of health care costs and expenditures*. Washington, DC, Department of Health, Education and Welfare, 1978 (DHEW Publication No. NIH 78-184).
33. Donabedian, A. et al. *Medical care chart book*, Seventh ed. Ann Arbor, MI, Health Administration Press, 1980.
34. US Public Health Service. *Proceedings of the Conference on the Decline in Coronary Heart Disease Mortality*. Washington, DC, GPO, 1979 (DHEW Publication No. (NIH) 79-1610).
35. Anon. Mortality in the United States, Canada, and Western Europe. *Metropolitan Life Insurance Company statistical bulletin*, 62(4): 10-13 (1981).
36. McDermott, W. Medicine: the public good and one's own. *World health forum*, 1: 125-234 (1979).

37. Serban, G., ed. New trend of psychiatry in the community. Cambridge, MA, Ballinger, 1977.
38. McDowell, I. & Martini, C.J.M. Problems and new directions in the evaluation of primary care. International journal of epidemiology, 5: 247-250 (1976).
39. Hadley, J. More medical care, better health? Washington, DC, Urban Institute Press, 1982, p. 8.
40. Leavell, H.R. & Clark, E.G. Textbook of preventive medicine. New York, McGraw-Hill, 1953, pp. 7-27.
41. Roemer, M.I. Evaluation of community health centers. Geneva, World Health Organization, 1973 (Public Health Paper, No. 48).
42. Freymann, J.G. Medicine's great schism: prevention vs cure: an historic interpretation. Medical care, 13: 525-536 (1975).
43. Fulcher, D. Medical care systems: public and private health coverage in selected industrial countries. Geneva, International Labour Office, 197?.
44. Roemer, M.I. From health insurance to health care systems - an international view. In: Social medicine: the advance of organized health services in America. New York, Springer, 1978, pp. 530-543.
45. Terris, M. Approaches to an epidemiology of health. American journal of public health, 65: 1037-1045 (1975).
46. Kramer, H.D. The beginnings of the public health movement in the United States. Bulletin of the history of medicine, 21: 352-376 (1947).
47. Knowles, J.S., ed. Doing better and feeling worse: health in the United States. New York, W.W. Norton, 1977.
48. Crawford, R. You are dangerous to your health: the ideology and politics of victim blaming. Journal of health services, 7: 663-680 (1977).
49. Yankauer, A. The ups and downs of prevention. (Editorial). Journal of public health, 71: 6-9 (1981).

HEALTH AND DISEASE: CONCEPTUALIZATION AND ITS IMPORTANCE FOR MODELS RELEVANT TO HEALTH RESEARCH[*]

by
P.H.N Wood

The notion of health represents an ideal, as in the WHO goal of health for all by the year 2000. Ideals are both important and necessary, inspiring commitment to challenging tasks. However, while recognizing their value, it is also essential to acknowledge their limitations. In this connection, it is interesting to remember George Bernard Shaw's response to an invitation to address the Ancoats Brethren in 1909. He rejected the title offered, "realizable ideals", by implying that no ideal worth a damn was realizable. Health would certainly satisfy Shaw as an ideal because, as Dubos (1) has said, "The concept of perfect and positive health cannot become a reality because man will never be so perfectly adapted to his environment that his life will not involve struggles, failures and sufferings".

WHO's euphoric definition of health as a state of complete wellbeing is readily falsified. For example, in a 14-day period, the average adult experiences about four symptoms (2). Viewed in this light, we are all sick. Looked at from an opposing perspective, complete physical, mental and social wellbeing can exist even in the presence of disease (though not of illness, it should be noted, the latter relating to manifest disease).

The problem is that the notion of health represents striving for a universal, a Platonic form or a visible heaven. As Aristotle showed for Platonism, the Achilles heel of ideas of this type is the lack of any satisfactory means of relating the form to the world of individual material things. Thus, although we may derive inspiration, we are left with insuperable problems about how to measure health and how to formulate objectives with any precision. Far from wishing to denigrate the aspirations, my concern is that the woolliness virtually predetermines that plans will fall short of expectations.

Why should we be captivated by notions of positive health, as if strategies directed at promoting the absence of disease or infirmity were limited and even negative? Surely the attitude arises from three things: our propensity to polarize phenomena, confusion over what constitutes ill health, and a narrow perspective of causality. Each of these demands scrutiny before we can begin to conceptualize health experience in a manner that may stimulate constructive research endeavour.

---

[*] This paper was issued in: Nizetic, B.Z. et al., ed. Scientific approaches to health and health care: proceedings of a WHO meeting. Copenhagen, WHO Regional Office for Europe, 1984 (unpublished document).

Unhelpful contrasts

Wartofsky (3) has indicated the four planes on which polarization can be detected, each of which reflects different aspects of the perennial conflict between medicine as science and medicine as art. These planes are the following.

1. Ontological dualism, wherein categorical distinctions are made between the natural and the human world. Many examples spring to mind: the Cartesian separation of body and mind, the biological distinction between the living and the non-living, and the sociological dichotomy between determinism and nominalistic choice. In medicine, there is the contrast between physicochemical conceptions of disease and all that is associated with healing, a dichotomy often conceived of as one between facts and values.

2. Epistemological dualism, which follows on with the sharp distinction proposed between causal-theoretical and practical-empirical contexts. Herein lies the contrast between rationalism and empiricism, epitomized in medicine respectively by Galen on the one hand and by the tradition stemming from Sydenham (4) on the other, though the distinctions are rarely pure.

3. Methodological dualism, which dichotomizes the natural and the human sciences, the former being concerned with abstraction and the elucidation of causal laws or universals, the latter with the individual and the unique: no two patients are the same, so that the physician individualizes his responses. The same distinction can be seen within the human or behavioural sciences themselves, manifested by the alternative goals and methods associated with seeking explanation or understanding. In fact, the contrasts are arguable, but the methodological implications have broader consequences.

4. Social dualism, which embodies these consequences, paralleling the other planes by mapping each of them into the domain of practice. This has been a fruitful field for sociological inquiry, examination of the status of medicine and the form of its organization, and so on. Three aspects of social dualism deserve special mention: concern with symptoms and experience as opposed to abstract diseases and how these are responded to, the humanistic or patient-oriented approach as contrasted with the scientific, and the relationship between physicians and others concerned with the improvement of health.

I have enlarged so much on the dualisms because they resemble the hydra - as soon as one copes with one, another raises its head. In many ways, the polarizations are at once artificial and inescapable. Both the artificiality and the inescapability are revealed by Midgley (5):

> What counts as a fact depends on the concepts you use, on the questions you ask ... There is no neutral terminology. So there are no wholly neutral facts. All describing is classifying according to some conceptual scheme or other. We need concepts in order to pick out what matters for our present purpose from the jumble of experience, and to relate it to the other things that matter in the world. There is no single set of all-purpose "scientific" concepts which can be used for every job. Different enquiries make different selections from the world. So they need different concepts.

To take the matter further, as Joris (6) has done, "Every scientific discourse is based on a set of culture- and ideology-bound metaphors, and has therefore to be read as metaphor, and not as an "objective" transparent language that would stand in a one-to-one relationship with an immutable, absolute reality".

The need for reduction

The polarization in approach of greatest relevance to conceptualizing health is that between holism and reductionism. The tautology (because the word "health" derives from the same root as whole and holy) automatically stigmatizes reductionism, but this unconscious play with words implicitly leads one to neglect the point made above by Midgley. Emotionally one may be attracted by the scale and richness of the existential qualities in holism, but this should not be allowed to obscure the woolliness and unawareness of science in so much of existentialism (7).

The nature of the apparent conflict tends to be enhanced by use of what seems to be the same language, whereas in practice the signs are used in different codes (8). It is generally assumed that science and reductionism are engaged in the pursuit of significance. In this endeavour, logical codes are used, the characteristics of which are shown in Table 1. The more romantic perspective, holism or the search for meaning, calls more on expressive codes which, for contrast, are also shown in the table.

These codes represent only tendencies, i.e. their properties are relative, but their unmindful use nevertheless leads to contention and non-factual argument (9) because people fail to realize that their purposes and the contexts in which they are viewing phenomena are different. Underlying the contention, however, is the fact that both approaches are attempting reduction, even if they pursue different routes to this goal. After all, the very utilization of a sign indicates that one intends it to stand for something, and what is that if not reduction?

Table 1. Properties of signs

Logical signs (intellect and understanding)	Expressive signs (emotion and feeling)
objective, rational, general, abstract, selective, transitive, homological, arbitrary, conventional	subjective, affective, singular, concrete, total, immanent, analogical, motivated, natural

Source: Guiraud (8).

So reduction as a process is not of itself bad, and it should be recognized as the mechanism by which we "pick out what matters ... from the jumble of experience" (5). The poet, in economy of words, the artist, with a line drawing, and the man of religion, with a parable, each reduces that jumble just as much as does the scientist with an enzyme system or an immune reaction. The differences lie in two areas: technique and purpose. As regards technique, one individual tends to draw on analogy, another on homology, although both methods are concerned with rendering experience comprehensible. As regards purpose, the objectives tend to be different: to appreciate the world or to identify means for changing it - though not exclusively so, because socialist realism can still be art even when it has a political intent, just as some speculation in science is very far removed from manipulating facets of everyday life.

The most fundamental aspect of the pursuit of health is probably that our desire is not to appreciate the meaning of health but to comprehend ways in which its attainment may be encouraged. The contrast is what Brecht inserted in Galileo's letter to the Grand Duchess Christina, "The intention of the Holy Ghost is to tell us how to go to heaven, not how heaven goes," which should serve as an antidote if we are tempted by holistic aspirations. In other words, we wish to identify practical initiatives that would have a high probability of enhancing health. The whole may be greater than the sum of the parts, but nevertheless it is the parts that are most likely to be amenable to manipulation.

The negative overtones commonly associated with reductionism derive from viewing the activity as an end in itself rather than as a means to an end. This is perhaps epitomized by the reliance of statistics on the null hypothesis (what could be more negative?). Yet it is only by this device that we are able to make intelligent decisions in the face of uncertainty. It may well be that many are imprisoned in their reductions. This is as true of the puritans, who acknowledge allegiance to latter-day restatements of Samuel Smiles and his lauding of self-help, as it is of the radicals who are concerned with restoring autonomy to the individual by seeking ways of reversing the depersonalization and dehumanization of health care, either by implicating the role of modern industrialized society (10) or by exclusionist warnings of the medicalization of life (11). However, this should not obscure the fact that reductions are necessary and good as the means of identifying potential initiatives. The challenge, then, is not to eschew reduction but to see that its fruits are located in a broader context.

Disease and illness

A part of this context is accounted for by disease. Health in the individual relates to levels of physiological function, an equilibrium that is threatened or disturbed by disease. Such an appreciation encourages the view that health and disease are mutually exclusive states. This perspective of discontinuity tends to be reinforced by clinical practice which, being a sphere of action, also imposes a dichotomy of choice - whether or not to treat. The underlying reality, however, is that health and disease represent the poles of a continuum. The overwhelming majority of individuals lie at intermediate points on the spectrum, and there is a variable threshold of expression at which disease processes become manifest. Thus, as a phenomenon, disease must be seen as being graded rather than discontinuous, which has important implications for the types of explanation to be sought.

The medical model of illness rests on the concept of disease (12), which has been the foundation for most of our understanding of biomedical derangements. This reductionist paradigm has been remarkably productive, and this has encouraged us to regard the notion as having substance. In fact, disease has no existence outside the bodies of those that suffer from it (13). It is no more than a simplifying assumption that enables us to perceive the similarities between the health problems or illnesses of different individuals. The contrast is between the abstract and the concrete, and the latter, illness, is a reflection of the interaction between disease and the individual's body. Seen in this light, the attempt to combat disease can be recognized as one of the means of ameliorating a person's illness. Obviously it tends to be the most effective because it is directed at eliminating the underlying cause of the problem.

The distinctions may be highlighted by definitions. Disease is a condition of the body in which its structure or function is disturbed or deranged. Illness is the state that is perceived by the individual when he or she is suffering from disease. Sickness is the state that develops as a reaction to illness, where the individual manifests behaviours in response to the expectations others have of him or her when he or she is ill. It should be evident from these statements that there is much loose usage of terms in everyday parlance, so that the identity of these distinct concepts gets blurred. For example, while the sick role is properly designated, much of what is referred to as illness behaviour is, in fact, a manifestation of sickness rather than of the underlying illness.

Other aspects of ill health

I have argued that health is virtually undefinable, at least for practical purposes, and also that it is relative rather than absolute in nature. The reductionist remedy in a situation such as this is to offer a definition in terms of the antithesis of the concept. However, even this is not simple; should one designate it by reference to disease or to illness? Moreover, this would be likely to lead to strategies confined to disease prevention, which most would agree are too circumscribed for a global health agency.

An extended perspective on health recognizes that two principal components have to be borne in mind: the assaults of specific hazards (such as lead to individual diseases) and the degree to which individuals are vulnerable to these hazards. Thus, in seeking the antitheses of health for purposes of definition and conceptualization, it is also necessary to acknowledge malnutrition and other forms of deprivation that increase vulnerability.[a] The notion of health promotion rests on this foundation, and the implication is that areas of social and economic policy and political will extending far beyond the confines of the medical model are equally vital as determinants of health.

If these considerations offer a more constructive background for the foundation of health-related policies, they still leave the other practical problem, that of the measurement of health, largely unresolved. It should be apparent that it is the impact of ill health, i.e. all the antitheses of health, that is of concern. Measurement therefore needs to be directed at illness, the consequences of illness (an area in which I have tried to extend the medical model into impairment, disability and handicap (14)), and the situation with regard to other influences, such as economic, occupational and domestic factors that promote ill health.

---

[a] Wood, P.H.N. Conceptual fallacies in health planning. Paper presented to the Third International Conference on Social Sciences and Medicine, Elsinore, 1972.

The usefulness of infant mortality or deaths from tuberculosis as indicators of much wider aspects of health and social experience may have encouraged aspirations for simple multipurpose health indicators. However, enough has surely been said to indicate that such a hope is somewhat utopian in the face of the more varied pattern of health experience that has emerged since life-threatening infections have been largely conquered. The same is true of most universal strategies for disease prevention, as should emerge more clearly in a later section. Only in the field of policy choices are possibilities available: those developed by economists based on the values people attach to both ill health and the initiatives necessary to avoid ill health. Even those are vulnerable to the extent that they rest on assumptions about the way "democracy" works in practice.

Causal thinking

All thinking on disease prevention and health promotion depends on our appreciation of how a condition arises and the nature of the cause-and-effect relationship between putative, extraneous factors and any particular ailment. This in turn is determined by the models of causality that govern our thinking.

With the exception of major epidemics (and even to some extent with regard to those), the problem is to account for the fact that some people are affected and others escape. There are two main classes of explanation for this particularity of disease experience. The first is that only a part of the population is susceptible (which introduces genetic factors, or nature), the second that only a part is exposed to determining or precipitating circumstances, i.e. nurture. These two possibilities have often been treated as if they were mutually exclusive, leading to unenlightening questions of the type, "Is this condition inherited?" It is important to appreciate how this has come about.

This leads me to examine the idea of single-factor etiology. An obvious example would appear to be simple Mendelian inheritance of a trait. The implication is that a single factor is both necessary and sufficient to account for the occurrence of a condition. The same mode of thinking is invoked even with the complication of pleiotropy, that a single cause leads to multiple effects, e.g. that the tubercle bacillus is responsible for both Addison's disease and phthisis. The dramatic successes of medicine have stemmed from situations like this, the infections, nutritional deficiencies and industrial intoxications being obvious examples.

In fact, the distinction between unifactorial and multifactorial etiology is usually more artificial than real (15,16). In practice, what we find useful to think of as a unifactorial condition is really only quasi-unifactorial (17), i.e. the factor is a necessary cause and accounts for a large part of the variance in the occurrence of the condition, but nevertheless fails to account for the whole of the circumstances.

It is more common for us to become aware of influences that appear to contribute to the development of a condition without these being sufficient to provide a complete or even an adequate explanation. Present knowledge of ischaemic heart disease typifies this situation. Two situations may underlie this state of affairs. One is the problem of heterogeneity, where causes are distinct but results are indistinguishable, e.g. mentally retarded dwarfs before cretins were identified as being distinct.

The other situation is described as composite etiology, where a given result occurs from the conjunction of multiple causes. The combinatorial properties of a series of causal or contributory circumstances or factors are presumed to be necessary for a condition to develop. This concept is particularly apposite to the chronic diseases of later life. One must suspect from their chronic nature that environmental components of etiology are more complex. Certainly, the difficulties posed by induction and latency over long periods make them more difficult to elucidate. Furthermore, one is tempted to suppose that genetic components are perhaps more important, if only because the age at which these diseases develop has rendered them less subject to selection pressures.[*]

A synthesis of how ill health arises

I have already developed a conceptual framework to assimilate the consequences of disease (14). My task now is to bring together the threads I have discussed and offer a framework to encompass the circumstances that give rise to ill health. I hold that it has to start from appreciation that individuals of the human species, and their health, are in a dynamic and yet vulnerable state (1). This is my response to the demands of holism, the ecological perspective indicating that the species is part of an ecosystem in which the balance of nature can be altered. One reflection of this is the manner in which disease experience has changed at different stages of evolution and history.

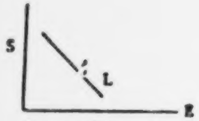
This broad view is so important in establishing a context that it merits exemplification. The major problems for man as a hunter-gatherer appear to have been trauma and undernutrition. The undernutrition was to some degree reduced by improved food production following the neolithic revolution, but the resultant aggregation in villages promoted increased passage of epidemics so that infections became the dominant scourge. Both of these features were enhanced respectively by the much later agricultural and industrial revolutions. Following not long after, the sanitary revolution presaged reduction in the toll of infection so that the so-called degenerative conditions and mental ill health came to the fore.

Against this background, one can see that the sources of influence on health lie both within the individual and externally, in the society in which he or she lives. Such influences may be health-promoting or deleterious, though few exhibit direct and immediate one-to-one relationships. All these circumstances may be conceptualized in broad terms along a spectrum that extends from the insensible to the material, as shown in Fig. 1. This scheme also distinguishes between what may be regarded as underlying influences and the expressions that derive from them, the interfaces representing vulnerability that culminate in liability and perhaps in the development of disease. The point is stressed because lifestyle is often defined as the set of behaviours adopted by personal choice, whereas Fig. 1 should make explicit

---

[*] Wood, P.H.N. *Op. cit.*

Fig. 1. Internal (individual) and external (societal) sources of influence on health
(extending on a spectrum from the insensible to the material)

				Distribution of liability
Individual	personality	biological attributes (age, sex, race, etc.)	genotype (susceptibility)	
Interface (vulnerability)	*behaviour* →	*lifestyle* → (including life events)	*liability*	
Societal	culture (values and beliefs)	social structure (including health care)	environment (especially hazards, including vectors)	interplay of susceptibility and exposure

L = liability
S = susceptibility
E = exposure

Source: Wood, P.H.N. (18).

the situation that Marx described: men make their own history, but not under circumstances of their own choosing. In other words, it is simplistic to pin the blame on individuals while neglecting the potent social and cultural forces that encourage non-health-promoting behaviour.

This conceptual framework and the operation of the various components are expanded elsewhere (18). At this stage, two aspects deserve additional comment. A reduction in the model concentrating on the more material components is instructive for some purposes. Thus, liability (L) can be plotted as the resultant of susceptibility (S) and exposure (E), so that L results from high S and low E, or vice versa, or from intermediate combinations. Exposure in this context represents the net effects of all the components of the model other than genotype. On such a plot, a linear distribution of L could be envisaged that would result from both S and E being distributed in Gaussian fashion. This is not established, but it is a plausible assumption for further exploration (what does not accord with this is the reported threshold influence of exercise on ischaemic heart disease). The relative contributions of S and E vary between different diseases, which would alter the slope of L. An estimate of the contributions can be derived by computing the heritability of liability, h^2 (the maximum extent to which a genetic hypothesis could account for the observed distribution of disease in relatives, as a percentage). A minimum estimate for E would then be $(100 - h^2)\%$.

The other aspect is more general. Health problems are heterogeneous and, almost paradoxically, the desire for a general perspective has to take account of this. Again, an evolutionary outlook is helpful. As long as the force of mortality is experienced in the perinatal period and childhood, the dominant influences of nutrition, development and hygiene are paramount. Once this milestone has been passed, the diverse origins of ill health become more obtrusive. Between one condition and another, the balance of factors and the subtle influences of culture are likely to differ, and it is unlikely that a universal prescription will be possible. Therefore, initiatives will have to be taken on many fronts. By seeking a universal solution, we would become vulnerable to the charge of holding an unscientific view, assaulting the most difficult problems while neglecting individual and potentially rewarding challenges. To paraphrase Berger (19), we need to be bold in our thinking and prudent in our prescriptions.

REFERENCES

1. Dubos, R. Man adapting. New Haven, Yale University Press, 1965, p. 1.
2. Dunnell, K. & Cartwright, A. Medicine takers, prescribers and hoarders. London, Routledge & Kegan Paul, 1972, p. 8.
3. Wartofsky, J. (editorial). Journal of medicine and philosophy, 1: 289-300 (1976).
4. Wood, P.H.N. Advances in the classification of disease. In: Smith, A., ed. Recent advances in community medicine, No. 2. Edinburgh, Churchill Livingstone, 1982, pp. 169-183.
5. Midgley, M. Beast and man, the roots of human nature. London, Methuen, 1979, p. 5.
6. Joris, P. New statesman, 16 May 1980, p. 750.
7. Comfort, A. What is a doctor? Lancet, 1: 971-974 (1972).

8. Guiraud, P. Semiology. London, Routledge & Kegan Paul, 1975, p. 10.
9. Crawshay-Williams, R. Quoted in: Report of a meeting of the European Branch on theory of classification, 2 October 1973. Classification Society bulletin, 3: 24 (1974).
10. Powles, J. On the limitations of modern medicine. Science, medicine and man, 1: 1-30 (1973).
11. Illich, I. Medical nemesis. London, Calder & Boyars, 1975.
12. Black, D.A.K. The logic of medicine. Edinburgh, Oliver & Boyd, 1968.
13. Wood, P.H.N. Peculiarities of medical characters for taxonomic purposes. Classification Society bulletin, 2: 23-28 (1970).
14. International classification of impairments, disabilities, and handicaps - a manual of classification relating to the consequences of disease. Geneva, World Health Organization, 1980.
15. Murphy, E.A. The application of genetics to epidemiology. In: Stewart, G.T., ed. Trends in epidemiology: application to health service research and training. Springfield, Thomas, 1972, p. 102.
16. Wood, P.H.N. Epidemiology of rheumatic disorders. In: Scott, J.T., ed. Copeman's textbook of the rheumatic diseases, 5th ed. Edinburgh, Churchill Livingstone, 1978, pp. 25-35.
17. Bury, M.R. & Wood, P.H.N. Sociological perspectives in research on disablement. International rehabilitation medicine, 1: 24-32 (1978).
18. Wood, P.H.N. & Bradley, E.M. The origins of ill health. In: Smith, A., ed. Recent advances in community medicine, No. 3. Edinburgh, Churchill Livingstone, 1985, pp. 11-37.
19. Berger, P. Facing up to modernity. Harmondsworth, Penguin Books, 1978.

INVOLVEMENT IN HEALTH: A SOCIAL CONCEPT OF HEALTH EDUCATION[a]

by
Ilona Kickbusch

Introduction

Conceptual reorientation

Health is a social idea. Virtually every programme seeking to protect, maintain or improve health has social and behavioural aspects, to which health education must be directed. In turn, the effectiveness of health education depends on its credibility, epidemiological validity and economic feasibility; these requirements must be fulfilled if it is to surmount the formidable challenges it faces in industrialized societies where major health problems such as accidents and chronic diseases are closely linked to social values and economic interests. We are witnessing at the moment a basic change in health education approaches in the European Region that are reflected in four main conceptual reorientations:

- from health prescription to health promotion;
- from individualistic behaviour modification to a systematic public health approach;
- from medical orientation to recognition of lay competence;
- from authoritarian health education to supportive health education.

Let me begin by clarifying these concepts in form of the general outline.

From health prescription to health promotion

If health does not define itself as the absence of disease but as a state of positive wellbeing, then its achievement requires a conscious effort on the part of the individual, the community and the state. Until recently, public health programmes in Europe have been heavily biased in favour of disease/disorder prevention programmes and expansion of the secondary and tertiary care systems. The orientation towards primary health care should be seen as an orientation towards health not disease, towards health promotion rather than cure of already well-advanced problems. Whereas a health prescription approach could well be dealt with in one system, i.e. the medical care system, a health promotion approach depends on the coordinated efforts of all units of society. An appropriate example would be smoking policies where a decrease only seems possible if the call for individual nonsmoking behaviour is accompanied by socially credible promotive public action for healthy lifestyles. As a consequence:

---

[a] This article was published in International journal of health education, 24(Suppl.): (1981).

- we need to make clear the strategic difference between health promotive education and disease prevention education, e.g. an enabling rather than prescriptive approach to health education;
- we need to understand the technical implications inherent in enabling approaches;
- we need to identify and remove barriers to the pursuit of high-level wellness.

The philosophical problem of legitimizing the concept and motivating a growing social interest in positive health must be translated into specific programmes in health promotion, research, training, and programmes at individual, family, community and national levels.

From individualistic behaviour modification to a systematic public health approach

Prevention has been the central concern of health education in the European Region, but the dominant focus of these efforts has been the individual and the family with regard to combating harmful lifestyles. This strategy has often been accused of "blaming the victim", as it calls for individual change, where often the responsibility seems to lie more with forces outside the individual's scope of influence. To take an example cited by a leading health education expert: the problem of sewage in drinking-water was not solved by ignoring the environment and appealing to individuals to boil their water. Indeed, it has been made clear repeatedly that it is the improvement of certain environmental and social conditions that have led to overall reduced mortality in the last hundred years. As new health problems start to overshadow the old, and new environmental dangers to health have developed over time, it seems necessary to reconsider systematic approaches that credibly link political, social and individual responsibility in maintaining health. Lifestyles and responsibility are as much products of social and cultural factors as concepts of health and illness. Definitions of what constitutes healthy behaviour need to be reconsidered in this perspective and base their approach on realistic assumptions about human nature and social learning. These would be based on:

- acceptance of lay competence;
- development of appropriate educational methods;
- orientation towards a social model of disease and health;
- coordinated strategies on the conceptual and managerial level.

From medical orientation to recognition of lay competence

The primary health care competence of individuals and families is only slowly gaining recognition. The notion is as yet little understood or appreciated and as a result has not been taken into account when planning and executing health education programmes. A new type of health education is required, starting from consumer demands and building on existing skills and knowledge rather than replacing them through hard interventionist measures. Well developed self-care programmes could transfer many technical skills to lay persons while at the same time making use of traditional health practices in the family. New forms of cooperation between professional and lay health care could be developed, thus opening the health care system to a much wider range of options and possibilities of cure and care. This is not to deny that in several instances communities and consumers often need all the help and expertise they can get to solve their problems, but any such programmes should be clearly based on their prerogatives.

Both approaches to care have something to offer the other mutually, to the benefit of the client. Ideas and technical innovations in self-care can, and do, flow in both directions.

With such a view in mind there is need for:

- purposeful self-care education programmes;
- incentives for physicians and other medical personnel to participate in patient education;
- identification and classification of lay primary health care.

From authoritarian health education to supportive health education

Health education is still primarily oriented towards preventive measures and should certainly be developed further, as has been stated. At the same time it is necessary to take note of the changes in the illness spectrum of industrial societies that call for new incentives in the field of curative and rehabilitative medicine. The realization grows that not all diseases can be cured or all disabilities prevented and that, in fact, an important objective of health care is to help persons with diseases or disability cope with the situation. In this context it is important to recall that as much as 85% of all care is lay provided. However, neither the individual nor the family receive sufficient supportive health education enabling them to cope with chronic illness, disabilities or acute illness behaviour. Health education practice in these areas has, up to now, been mainly supplied by the wide range of self-help groups that have developed as a form of mutual aid and mutual learning with regard to rehabilitation and chronic conditions and have by now spread into various fields including mental health. The concept of health for all must also imply the chance to lead as independent a life as possible under certain conditions - otherwise it would be prone to dangerous forms of "healthism" that should have no place in health education practice.

The appeal of self-care and self-help can be expected to grow as self-diagnostic and self-treatment technology is developed (strep screen kits, blood pressure cuffs), as the demand for caring services supersedes demand for curative services, and as continuing economic pressures mount to reduce inappropriate use of professional services. There is a role for health education in helping towards:

- understanding and approval of lay initiatives in the field of curative and rehabilitative medicine;

- support of mutual aid groups and self-care initiative at the local, regional and governmental level.

WHO European Office regional strategy

"To achieve health for all will require a fundamental reorientation of priorities over a period of twenty years" - such is the direction given for European health policy in the "regional strategy for attaining health for all by the year 2000" (EUR/RC30/8) for the European Region.

What consequences does the regional strategy have for a health education programme, its scope and focus of interest? The strategy document itself gives some first directions, pointing out the high relevance of health education for the promotion of lifestyles conducive to health and at the same time expanding the notion of health education in accordance with new developments in the field. Health education has come a long way from just "blaming the victim" to a concept of developing awareness of health and providing the opportunities for more informed choices. One of its main concepts is now that of participation of the individual in health care as a competent actor in a community setting, rather than by passive compliance. The more imaginative forms of health education and information that the regional strategy calls for can be developed along three main lines:

- raising individual competence and knowledge about health and illness, about the body and its functions, about prevention and coping;

- raising competence and knowledge to use the health care system and to understand its functioning;

- raising awareness about social, political and environmental factors that influence health.

In accordance with this direction the Regional Office has developed a new programme proposal in health education that aims to support the three main elements of the regional strategy (lifestyles, preventable conditions and reorientation of care provision) and has implications for all parts of the main support programmes mentioned in the strategy document: political support, health technologies, delivery systems, management and human resources. Of course, new perspectives in health education are to some extent still at a stage of first reorientation and it is not yet clear which exact forms they should take in practice. Ambiguities and controversies need to be discussed openly so as to define new long-term priorities on the basis of sound knowledge.

At this stage, two perspectives that might be termed the political and the community perspectives are both strongly concerned with defining health as a social and political idea. Whereas the political perspective will focus on preventive policies relevant to health mainly at the national level, the community perspective will concentrate on social change and social action at the local level with a strong argument for more participation. Of course, these approaches are not mutually exclusive; they might even be termed complementary. In the same way an interpersonal or mass media approach might be appropriate at different stages in time for different target groups. It is for this reason that the health education programme has chosen a comprehensive, flexible, and research-oriented approach.

Looking ahead towards the year 2000 it is certain that new directions and new problems will arise over the years. The future of health education with regard to issues as well as methods will, for example, be strongly influenced by the introduction of new technical information and communication media that present both new dangers and new potential. On the one hand, excessive media exposure may increase the false perception of reality in society; satellite communications will make it more difficult to influence media messages with regard to their health messages as they will transcend national boundaries; and data banks and information processing may lead to a highly controlled rather than highly informed society. On the other hand, the diversity and variety of the new media may offer new chances of participation; cable television can enable local and community-based forms of communication; and two-way systems may allow for less authoritative handling of media messages. The direction of this change will, of course, depend on economic, legal and social control over the new technologies, and on the amount of participation by consumers in media power and decision-making.

With such perspectives in mind, the programme stresses lay competence, self-care and mutual aid in the areas of health promotion, preventive health education, and supportive health education, with a view to motivating the Member States towards new approaches to health education concepts, planning, practice and training.

A social paradigm of health

Health educational concepts have, of course, taken different directions in Member States: these are related to the historical and political development of the health services, the extent and form of institutionalization of health education itself, cultural attitudes and beliefs and the main health priorities set in the national context. In some countries health education is a well organized field with a long tradition; in others it is at the beginning of its development. While these differences certainly cannot be neglected in planning and programming for health education or when deciding on directions for health education research, it does seem possible to start from several basic orientations:

- health education should work with new images and a positive concept of health;

- health education should make use of innovative educational approaches and technologies;

- health education should be geared towards community action and lay participation;

- health education requires a multisectoral and multidisciplinary approach;

- health education must develop new strategies on various levels of action (e.g. governmental, legislative, professional, community);

- health education must take account of the social and environmental factors that influence health decisions.

These orientations reflect a change in definitions and paradigms of what constitutes health and a healthy lifestyle - and therefore a new approach to WHO's much disputed definition of health as total physical, mental and social wellbeing. There has been much critique of the definition mainly with regard to its utopian character. But let us look at it once again with special consideration of the concept of social wellbeing.

What is a healthy life? What is a life that is worth living? In its specific form, the definition of such a life would, of course, differ tremendously from society to society, from culture to culture. There are, as Valentina Borremans says, as many notions of health as there are of beauty, of happiness and of wellbeing. At the same time, there is one central point that has become clear to us over the last decade through research in social anthropology and social epidemiology: social integration and social support, or even broader a sense of social coherence for belonging, seem to be central to wellbeing, no matter if a person is healthy in our sense of the word or not. Social wellbeing is the wellbeing of people in their social relationships.

Taking this into account, we can name a number of factors that help develop a social model of health. In a recent paper prepared for WHO, Lowell Levin has listed some of the most salient features of a social model of health. I will summarize them as follows.

- A social model of health sees the limitations of a professional, essentially industrial model of health. Twenty years ago, health care was seen as something happening between doctor and patient in a relationship that was clearly defined: the doctor treated, and the patient acquiesced. Ten years ago, this hierarchical model was transformed into an exchange model based on service economy: the doctor was termed the provider of health care, and the patient the consumer - and it was up to the consumer to cooperate with the provider to ensure optimum results. At the beginning of the 1980s it is becoming increasingly clear that health is not just a thing between doctors and patients, it is a total care resource. People are not just consumers of health care, they provide it themselves. This rediscovery of the nonprofessional health care has made it possible to take first steps away from the exchange model. This implies a nonprofessional construction of health and illness oriented towards everyday life.

- A social model of health is realistic about the fact that for many people, health is not the highest goal in life. Health norms are often in conflict with more important goals, be it happiness, adventure, or pure necessity. It is part of everyday life that people must take risk decisions and there are inherent dangers in forms of health education that wish to restrict the minimum options open to people under restricted and trying living conditions. It is central that health education does not turn into a new form of social control.

- A social model of health sees self-reliance as an expression of human dignity and development. Self-care is the first form of care - and all other levels of professional care (also of professional primary health care) are supplementary and supportive. The significance of self-care finds no correspondence in the power relationships in health care provision. Health education strategies that are oriented towards self-help therefore need to encourage a broader range of self-reliance, in the sense that further options are opened instead of restricted.

- A social model of health implies that there is more than just one form of curing or healing. In every society, even those most dominated by a medical, professional model of health, we find many different forms of health care provision, and very often we find that the "patients" move between several of these systems. This does not mean that every health fad should be taken up; it does mean, though, that we are in need of a realistic, complex model of health behaviour. People do not live as "smokers", "alcoholics", "disabled", etc. Forms of successful intervention must take into account a holistic view of health and illness and be integrated into a complex whole.

- A social model of health implies a new role for health education: an advisory and supportive role or, as Levin puts it, "social action without social control".

It is with this basic orientation that the European Office of WHO has developed its programme in health education for the last period of the Sixth Programme of Work 1980-1983 and has produced a "Regional programme in health education and lifestyles" that was presented to the Regional Committee in September 1981. This programme was accepted by all Member States with the additional challenge to prepare the technical discussions at the thirty-third Regional Committee in 1983 on "Lifestyles and their impact on health". In their discussion of this programme the Member States accentuated the integral role of health education in a systematic health policy, making it clear that health education or self-help cannot be a handy panacea for an active, preventive health policy.

Finding effective strategies for health education in the present European situation is therefore a formidable challenge. In the past strong emphasis has been placed on the individual as both cause of and solution to health problems, while neglecting social factors and social solutions. Moreover, health education, somewhat surprisingly, often fails to use all the modern resources of educational technology, particularly mass communication methods. Finally, from an ethical point of view, health education must be concerned with issues such as conflict of interests between different society groups, behaviour modification and freedom of individual choice in health behaviour versus community interest.

The new health education programme of the Regional Office for Europe therefore hopes to motivate the Member States towards a new approach, that helps people achieve health and manage illness by their own actions and efforts as a process of empowerment and competence.

The three main programme areas: health promotion, preventive health education, and supportive health education

Health promotion

When entering this field, a major problem is the lack of a clear concept of what is understood by health promotion activities. Thus, there is a problem both of definition of the terms and of the wide use of this term in health literature, where it has come to refer to a variety of approaches in dealing with unspecific disease prevention and in promoting a positive concept of health associated with the quality of life, rather than being limited to morbidity and mortality. As several health educators and health planners must have felt unsure about this new fashionable term, a general overview of health promotion concepts, practices and formal programmes has been prepared by the Regional Office, and discussed by a working group on the "Concepts and principles of health promotion".

The clarification of the concept and basic principles of health promotion developed through this working group should not only make the identification of projects easier but will facilitate the exchange of experiences, knowledge, research and training programmes in the European Region. It will strengthen the network of people working in the field and improve the quality of research and planning relevant to promotion of positive health and healthy living.

To work in the direction of a conceptual consensus does not imply that there is a single or simple "golden path to good health". There is no optimal lifestyle for all people and health education activities in the field of health promotion are often in danger of moral judgement or excessively enthusiastic adherence to certain activities, e.g. fitness. An effective programme in health promotion must be based on a clear understanding of the role that different factors play in the development of and adherence to a certain lifestyle and of the relationship of certain lifestyles to health.

Although there are some studies of illness behaviour and of public beliefs about the causes of specific diseases, there is a dearth of information concerning conceptions of health of different social and cultural groups and no material on which international comparisons could be based. Programmes in health promotion need material on the degree of public awareness of the relationship between lifestyle and health; and on the extent to which people believe that daily decisions about diet, exercise, leisure and relationships are choices which they believe are important for their own health. Research must identify those activities which people engage in to maintain or improve their health, which a health promotion programme could support and build upon - jogging, playing sports, monitoring food and alcohol consumption, relaxation techniques and yoga, involvement in youth, social constructive or creative community activities, and participation in community groups working to improve the provision of local facilities or to change the environment. Effective ways of developing health promotion will, of course, vary between economic, political, planning and cultural systems at different stages of technological development and with different manpower resources. However, certain questions are likely to be general and will be discussed both by the working group on health promotion and by a workshop on lifestyles and living conditions planned for October 1982. The main agenda for this meeting will be:

1. to assess the situation of social science research on lifestyle and social conditions;

2. to make a critical review of socio-epidemiological prevention and intervention studies; and

3. on the basis of this information, to present feasible proposals for integration of the lifestyle concept in health policy and social policy, and to recommend them to political decision-makers.

Since lifestyle is an integral component of health promotion the activities in this subprogramme will be of high relevance not only to the health education programme but to the regional strategy as a whole.

Preventive health education

Strategies for preventive health education are well under way in the European Region and have much to benefit from each other. Three main areas of work have been chosen for the European regional activities: smoking and health, legislative action in food policy, and health education of preschool children. They allow a comparison between different approaches to prevention (positive health programmes, legislative action and prevention in natural social structures) and their possible combination. To maximize the potential of sharing experiences and cooperative efforts, preventive programmes need to be identified and operators effectively networked.

In the months of January and February 1982, the Regional Office will call two meetings on the subject of smoking control in Europe; the first is to plan for the fourth survey on smoking and health due for the period of 1982-1983, the second to plan for the Smoking and Health programme for the Seventh General Programme of Work. These two meetings will enable the European Office to develop an integrated approach to combat one of the major health problems of the Region. It is expected that the new programme will encompass the following activities:

- the promotion of smoking control action in countries where there appears to be little or no action at the national level;
- the collection of information on smoking rates and costs;
- the development of predictive models of the economic medical consequences of current trends;
- case studies of special target groups (women, children and people at their workplace);
- regular expert reports on progress in smoking control in Europe;
- the stressing of passive smoking as a central issue of public concern;
- visible promotion focusing on the dangers of smoking and the necessity of smoking control;
- the promotion of greater awareness of the importance of knowledge of the health consequences of smoking among health professionals;
- the publication of expert reports on the state of the art on cost-effective methods of aiding smoking cessation; and
- finally, a regular review of strategies of the tobacco industry.

As developed in the basic orientation of the programme, it is especially preventive health education that is in strong need of unequivocal legislative action and political support. A study on legislative initiatives in preventive health education will briefly consider the extent to which legislation supports or inhibits the attainment of preventive health education programme objectives, and relevant barriers to the promulgation of supportive legislation (economic, political, cultural). A working group will assess these findings and make recommendations regarding strategies and tactics vis-à-vis legislative initiatives.

It has been suggested to concentrate on food policies in the European Region, as this allows an approach to an everyday health issue that concerns large groups of the population and is not a problem of addiction. On the other hand it is an issue that is closely linked to social and cultural changes in lifestyles as well as individual behaviour, and involves both consumer groups and industry as new partners in health educative efforts.

Within the framework of health education, one of the new tasks is to help clarify and relate the natural social structures already in place that contribute to health behaviour in prevention, e.g. the family, school, peer groups, neighbourhood, community. The Regional Office can collaborate with Member States to construct a new supplementary role for organized health education that works through natural social institutions and networks. The social etiology of disease has shown the influence of the social environment of health (e.g. through social stress, social support, social networks) and has made it possible to understand the buffer role of an intact social life for the maintenance of a self-defined standard of social, physical and mental wellbeing.

WHO should play a leading role in coordinating research activities in this area to be able to understand the scope and style of lay health beliefs, behaviours and activities that are relevant to prevention of health problems. In view of the importance of primary socialization, preschool children have become a key target group of health education with interesting model projects being tested in the Region that involve the family and social networks in the learning process, and show the health implications of social learning in general. Prevention is thus also a function of an integrated social life, and in some instances it will be more important to develop strategies for "reweaving the social fabric" rather than health education activities.

The more WHO insists that health is a social idea, and health for all a sociopolitical issue, the more it must be aware of the contradictions involved in broadening the concepts of health and illness. This is especially relevant for the area of prevention where the concept of lifestyle is prone to moralism and extension of social control. Dealing politically with the social resources of the family and the lay system is a highly delicate matter, and often in the past, programmes have tended to destroy self-help potential instead of supporting it. These ambiguities have to be considered when entering this new field of research and preventive action.

Supportive health education

Public and professional interest in self-care and self-help is growing in the European Region. Evidence of this interest can be seen in the large number of do-it-yourself health texts available in bookshops and newspaper health advice columns that enjoy a solid readership, as well as in the diversity of mutual aid groups that have been formed in some countries. Alcoholics Anonymous, the early prototype of the "anonymous" group, has been joined by many others dealing with addiction problems or problems where a social stigma is involved, e.g. mental health groups have been organized by both ex-patients and the relatives of mental patients. A large amount of health education in the European Region is in the form of self-education in lay health care, especially in sharing of knowledge and experiences for those afflicted with chronic ailments.

Purposeful self-care education programmes for adults with chronic illness and disablement is limited in the European Region, although there has been some preliminary research and development of interest in several countries. Education of patients under active care has a long tradition, although it is still surprising to find health practitioners who show little interest in informing their patients of the diagnosis, much less inviting them into a partnership of assistance in treatment and maintenance.

In practice, however, mutual aid groups are also gaining importance as useful, essential, community resources in chronic disease management. Many physicians refer patients to mutual aid groups at the time of discharge from hospital, e.g. for post-mastectomy care. The lay resource in health care has been rediscovered and reappraised as a vital baseline service without which the professional cure system would collapse. Another key area gaining new interest is self-medication, which is receiving positive recognition, with manuals being distributed for consumers. Research in supportive health education needs to clarify disease-oriented patient education as well as general procedures; to increase knowledge of lay practices in coping with chronic diseases and long-term disablement (self-care and family care); to study the extent, formation and dissemination of mutual aid groups; and to assess the need for and potential use of self-care education programmes.

The training of health professionals needs to acknowledge the skills and competence of lay persons in ensuring their own wellbeing, to redefine traditional concepts of health and illness, and to apply the concept of learning from the patient as a basic for planning an educational effort.

The Regional Office has established an Information Centre on Research into Self-help and Health which is to assist in the networking and dissemination of information on self-help and mutual aid, and assist in the organization of meetings to promote new concepts of involvement in health care with special reference to health education strategies.

A workshop will meet in 1982 to review existing health education experiences of mutual aid groups for patients in selected disease/disability areas, with emphasis on the type of support such groups can give, on the factors and lifestyles facilitating or hindering their functioning, and on their relationship/interaction with governmental, professional and voluntary organizations.

A working group on the relationship of lay primary health care to health education planning will be appointed to define the implications of the development of such care for health education policy and programme planning. Participants will be lay persons and professionals actively engaged in the development. A publication on self-help in Europe is in preparation and will be available in summer 1982.

Strategies for all three areas of action

Even when it is fully recognized that health education must be oriented towards community action, we shall still be in need of various forms of health information for the public through the media. Here again we are posed with the problem of new contents of health information (creating new images), new methods and new technology. A broad range of media activity can be envisaged to help the public in making informed choices on health.

Such support implies the provision of information not only on physical and social risk factors, but also on the structure of health care systems, dangers in the environment and the like. It involves the development of mechanisms for the rapid transmission of advances in health care to the public. It can imply the establishment of self-help/self-care courses that can be taken up locally, and the participation of the public in media programmes - as in the case of mutual aid groups, for example, which must be able to use local media to disseminate their ideas and to find members. It can also mean the setting up of community-based health information systems, e.g. "health shops" accessible to the general public.

This implies discussions with media people of all kinds, television and newspaper journalists, and also consumer groups who are publishing health information. For WHO it means a policy of open doors: going out and challenging old ideas of health and illness and giving information in forms a broad public can benefit from - and establishing links between the Regional Office and groups involved in information dissemination. This, of course, means that all institutions involved in health education and public information would have to cooperate closely in bringing their results to the public.

The specific strategy for each of the three major fields of activity, i.e. health promotion, preventive health education and supportive health education, will vary depending on the state of the art and the developments in the Region, but will generally be as follows.

(a) Research will be pursued in selected fields where the present knowledge is insufficient for organizing effective programmes. Emphasis will be given to ensuring the participation of national research institutions and groups already active in the field, with WHO serving partly as a catalyst and partly as a coordinator of the research at regional level. For this purpose, a network of collaborating centres in health education research will be established. Care will be taken to identify innovative approaches, developed in Member States, as subjects for the studies. The studies may be conducted by Member States in conjunction with the Regional Office, by WHO collaborating centres in the Region, or by nongovernmental organizations, such as the International Union of Health Education, and intergovernmental organizations in collaboration with the Regional Office, such as the Council of Europe or UNESCO.

(b) The available information (including the findings under WHO regional programmes, or research by Member States, organizations and individuals) will be gathered and evaluated and recommendations for action will be drawn up through working groups, study groups, regional conferences and demonstration programmes in Member States.

(c) The training implications of the activities will be assessed at meetings of educators convened after selected working groups, study groups and regional conferences.

(d) The impact of the activities will be assessed by means of surveys, study groups, regional conferences and evaluation of health programmes in countries.

Preliminary outline of the Seventh General Programme of Work 1984-1989

New programmes have been developed that encompass activities now incorporated into the health education programme. Separate programmes have been drawn up for health promotion, public education and information for health, lay community and alternative health care and finally for smoking and health. The development of the programme in the period 1980-1983 should result in:

- the definition of special areas of interest on which the Regional Office would concentrate, e.g. certain population groups, certain areas of intervention, certain strategies of education (special regard must be given to the greater prevalence of ill health among lower social classes);
- a more justly weighted concept of lay care that takes into account health educational needs of both developed and developing countries of the Region and avoids the wholesale exporting of certain methods and trends (e.g. overmedicalization) from the developed to the developing countries;
- a more definite view of how the role of the health educator should be conceived and what the training needs will be;
- a more definite view of the role of the health professional in the field of health education;
- emphasis on the need to develop programmes not only to educate lay people, but also to reach politicians, government departments and professionals in the health field.

In the perspective of the programme the basic concept of health for all thus comes to mean not only the broad and equal distribution of medical care, but active participation and empowerment of lay persons, who are at the same time consumers and providers of health care. Health education must help people to rediscover the importance of their own health, and health policy must make the healthier choices the easier choices. Only in this framework can the health education responsibilities in the European Region be met.

BIBLIOGRAPHY

Health education and lifestyles. Copenhagen, WHO Regional Office for Europe, 1981 (unpublished document EUR/RC31/10).

Levin, L. Self-care oriented health education from the perspective of the WHO role. Geneva, World Health Organization, 1980 (document HED/80.1).

Medium-term programme for the remaining part of the Sixth General Programme of Work 1980-1983. World Health Organization, 1981 (unpublished manuscript).

Regional strategy for attaining health for all by the year 2000. Copenhagen, WHO Regional Office for Europe, 1980 (unpublished document EUR/RC30/8).

THE WELLNESS PROCESS[a]

by
John G. Bruhn, F. David Cordova, James A. Williams
and Raymond G. Fuentes, Jr

Good health is only a part of what individuals can experience; they can also experience "wellness". Wellness can only be experienced by individuals, however, if they actively pattern their behaviour and lifestyle to suit their circumstances. Wellness is not a static state of being. Rather it is a continually evolving and changing process in which individuals may participate; it is, as much as possible, an integration of all aspects of their physical, mental, social and environmental wellbeing. The purposes of this paper are (a) to discuss the concept of wellness and its difference from good health, (b) to present a basis for an understanding of the wellness process, and (c) to propose an index for assessing (or measuring) wellness.

Good health

Both lay people and health professionals often define good health as the absence of the clinical signs of disease. It has traditionally been regarded as a state or condition towards which all should aspire, because the behaviours and attitudes of good health seem to enhance longevity (1-4).

One might assume for the emphasis given to health by the mass media that good health is highly valued in our society, but the lack of healthful behaviour on the part of many people leads us to question this assumption. White has observed that destructive habits of lifestyle are a principal hazard to good health in this country; he stresses the need for a greater understanding of how and why people choose to impose certain high risks to their health upon themselves (5). A recent Canadian document emphasizes that, because self-imposed risks, bad habits and environmental hazards underlie each of the five major causes of death, the need for programmes to encourage individuals to modify their habits and lifestyles is crucial (6). The US Government has issued a similar document (7).

The prevention of disease, however, is but a part of the maintenance of good health. Prevention has been too often viewed by both the individual and institutions as merely what can be done to forestall disease. Furthermore, prevention frequently focuses on one disease at a time; preventive measures are often seen as single interventions, e.g. immunizations.

Thus, the disease model pervades our thinking about good health. As Mico and Ross state, "Practically all that is done in health care now for prevention-diagnosis-treatment-rehabilitation purposes is done from within the context of disease-oriented programs and organizations" (8). We are better acquainted with what *not* to do to avoid being sick than we are with what to do in a positive way to remain healthy or become more healthy! Lay people are frequently warned about the risks of disability or death because of certain actions (or inactions), but we are seldom instructed about what we can do to become more healthy.

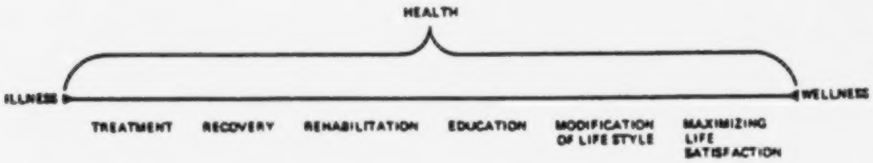
---

[a] This article was published in the Journal of community health, 2(3): 209-221 (1977).

Good health is not enough

Good health, as currently conceived, implies a static or defensive posture. It is frequently seen as a consequence - the result of little or no activity on the part of an individual - the result of avoiding illness-producing circumstances or behaviours. In actuality, however, good health is a continual process that can evolve into wellness (Fig. 1) (9). As yet, we have no single index or cluster of factors that can be used to measure or assess an individual's health (10). Goldstein states that health is related to the individual's mental attitude, to the value an individual places on what is essential for his or her continued wellbeing; health is the essential value from which all other values can be understood; it is prerequisite for the realization of all other goals (11). Being sick is the loss or decreased importance of health in an individual's scale of values.

Fig. 1. The health continuum



Lay people also define good health in terms of the absence of physical symptoms, a feeling of wellbeing, and the ability to carry out normal activities (12,13) In addition, most lay people measure health as it relates to the standard of everyday good health that has been established by the individual family, the community, and the society, or as it has been evaluated by others (14).

Rokeach has observed that a personal sense of accomplishment and capability are values given great importance in the United States (15); humanistic psychologists have suggested that personal growth - the demonstration of one's capabilities - is a part of being well. Jourard states, "I have come to see sickness as an outcome of not changing when the time for change has come" (16). He adds that man's view of his capacity to cope, to survive and to grow are critical factors in the development of his life. Because man is always surpassing what were once believed to be his ultimate limits, how one perceives his potential is of the utmost significance to his health (15,16). Thus, man is capable of experiencing more than good physical and mental health. He can experience wellness and should actively seek to reexperience it throughout his life.

Beyond good health

Good health thus becomes one point along the health continuum; it is one point in the process of being or becoming well (17). There are several differences between wellness and good health. First, wellness is a process that continues in time, whereas good health is a state of being or a stage along the health continuum. We can lose good health, we can be ill, but the potential for wellness is always present in some degree.

Second, wellness is active; it depends upon a person's initiative and requires a person's action, movement, development, decisions and value judgements, whereas good health may exist without any effort on the part of an individual. Some people experience good health despite their actions or inactions. In this respect, wellness is a response to an individual's potential for personal growth and involves utilization of all his or her resources - social, psychological, cultural, environmental, spiritual and physiological - that might influence his or her potential.

Third, wellness is related to the processes of learning and development. The tasks an individual must accomplish at various points in the processes of learning and development are cumulative, so that when factors that enhance wellness are delayed or absent the potential for wellness is reduced. Good health, on the other hand, is an objective assessment, a description of a state, i.e. how well the individual is doing at a point in time. Good health can be lost when the clinical signs and symptoms of a disease appear and can be regained when clinical signs and symptoms abate.

Fourth, an individual may experience wellness while at the same time experiencing clinical symptoms. For example, an individual may have a headache or backache or an attack of appendicitis and yet experience wellness in the nonphysical aspects of his or her life. It is tempting to regard wellness as the absence of clinical symptoms of disease and to regard illness as the absence of any degree of wellness. Wellness and illness, although at opposite ends of the health continuum, are not mutually exclusive. Hence, wellness differs from good health, which implies a state of being free from disease. Wellness is a process that encompasses all aspects of an individual's health in the broadest sense.

The wellness process

No single theory provides a background for an understanding of the wellness process. Such understanding must come from numerous disciplines. The wellness process is made up of several components: one is personal growth (18); another, internal control (19); and still another is knowledgeability about health-related activities and habits (20). These are all aspects of personality and are a reflection of its potential for growth and change.

Personality refers to the patterned ways in which an individual experiences and acts in life situations. These actions affect not only the social environment but also the health of the body. Jourard asks, "What ways of behaving in the world will promote health?" He states that the most obvious answers relate to diet, rest and exercise. People who have been adequately informed about general hygiene will follow a diet that maintains health, energy and weight; they will care for their teeth; they will sleep enough to restore their energy; and they will exercise enough to keep fit. He observes that a more subtle factor in the production and maintenance of physical health is the individual's morale or "spirit". Increasing evidence indicates that, if a person finds his/her life challenging and satisfying, his/her body works better and he resits infectious illness better. Jourard calls this composite image "a physical-health-promoting personality". He presents a contrasting image of an "illness-yielding personality", characterized by such traits as a lack of care about or attention to eating, sleeping and exercise, a lack of satisfaction in interpersonal relationships, problems with self-image and self-identity, a lack of emotional spontaneity and an overdeveloped sense of duty. He notes that periods of illness may, in reality, be periods of respite from a dispiriting way of life for some people (21).

The many modes of being and the many degrees of health are learned during the developmental process. The options that are most satisfying to the individual are retained and reinforced. These, in turn, determine the potential for experiencing wellness. Indeed, good health habits have been shown to be cumulative. Those who followed good habits were in better health, even though older, than those who failed to do so. This association has been found to be independent of age, sex and economic status (22).

Erikson's matrix of the eight developmental stages of humans offers a beginning in the search for an understanding of the wellness process (23). Erikson formalizes the progression through time of the development of aspects of the human personality. Each developmental stage is related to all others and, therefore, each is sequentially dependent upon the others. In addition, each development item exists in some form before its critical time normally arrives. If wellness is an integral part of the human personality, then tasks that must be accomplished in the development of wellness behaviour should be identifiable at various stages of personality development. The maximum potential for wellness at each developmental level is dependent upon the satisfactory completion of the wellness tasks at previous stages along the developmental continuum. Thus, wellness can be experienced in various degrees at each developmental stage and is not an ideal state to be reached in the final years of maturity. Wellness is always developing: the question is not "Am I well?" but "How well am I *now*?"

At each level of development, the frequency of certain behaviours increases and establishes a pattern of wellness behaviour appropriate to that stage. For example, in early childhood safety judgement is developed: "Don't go into the street", "Don't play with matches", "Falls hurt". The development of concepts of risk, danger, hurt, and how to recognize and avoid these situations without having to experience them depends upon the capacity to generalize and to learn about them. Similarly, as children develop the concept that illness represents risk, danger, hurt or harm, their view of health and their potential for experiencing wellness are enhanced.

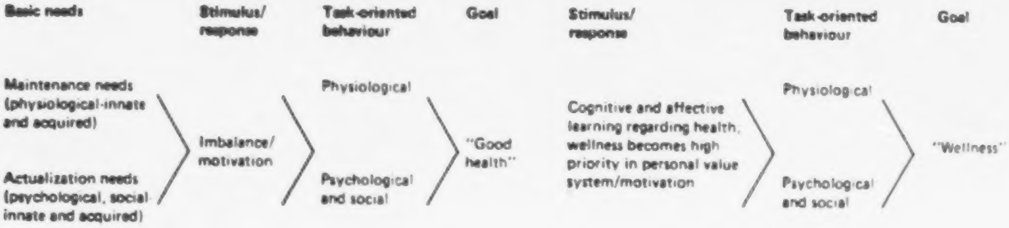
The level of wellness that can be achieved at each stage of development is dependent upon the completion of certain wellness tasks. A range of tasks is appropriate at each stage, and certain basic tasks need to be completed at each stage so that a person may progress. Many factors - environmental, physical, behavioural and social - and their interactions influence the completion of the wellness tasks. A profile of the less well person can be developed at each developmental stage, so that measures may be taken to reduce the risk that such a person will become ill.

Wellness tasks

Parcel has observed that one of the goals of health education is to integrate the information and attitudes that a person has acquired concerning health so that he/she will be able to assume responsibility for his/her own health (24). He notes that health skills must be appropriate to a person's cognitive and social level and that the young child has a limited ability to develop reasoning skills and to relate concepts of health and illness to actual experiences of illness. It is not until later that he/she is able to deal with abstractions regarding health.

The way in which adults teach children about health is determined by their own notions of health and illness. Children grow up in a society where health is not discussed or emphasized, except in the usual terms of absence of illness. To be a healthy child is somehow good, but wellness has no place alongside the values of honesty, industry, and so forth, as something a child should actively do or be or become. There is little parallel in a child's early learning for developing wellness, as there is for developing kindness to animals. For this reason, it is important to identify both the tasks that are appropriate for learning about wellness at various points along the developmental continuum and those tasks that will enhance an individual's motivation to work toward wellness rather than just maintain good health (Fig. 2).

Fig. 2. The process of successful wellness-seeking behaviour


Basic needs
Stimulus/ response
Task-oriented behaviour
Goal
Stimulus/ response
Task-oriented behaviour
Goal
Maintenance needs (physiological-innate and acquired)
Actualization needs (psychological, social-innate and acquired)
Imbalance/ motivation
Physiological
Psychological and social
"Good health"
Cognitive and affective learning regarding health, wellness becomes high priority in personal value system/motivation
Physiological
Psychological and social
"Wellness"

Havighurst has outlined some specific tasks to be achieved at each of Erikson's eight developmental stages (25). Table 1 shows the relationship between certain developmental stages and tasks. Examples of minimal wellness tasks are also shown. It should be pointed out that the wellness tasks are "integrated" measures, i.e. they sum up diverse information, and many of them are of a relative nature. This is necessary because it is unlikely that we will be able to arrive at figures or absolutes that are direct measures of states of health (26). It has been possible, however, to quantify a person's assessment of the degree of adjustment that certain life events require of him/her and, in addition (given the frequency of occurrence of these events in his/her life), to predict the likelihood of his/her becoming ill (27).

A method of assessing the extent to which a person has completed certain wellness tasks could be developed similar to the method for assessing the degree of a person's adjustment to life events. The meaning of wellness will vary culturally and within the same culture, according to the importance an individual ascribes to wellness, his/her image of what wellness is, and the degree to which his/her physical and social environment permits and supports wellness. Thus, the wellness tasks outlined in this paper may not be completed in the same way in all cultures. It is necessary, however, for a person to complete all of the minimal wellness tasks to achieve maximal wellness at any developmental stage. A failure to complete all of the wellness tasks at any developmental stage would indicate that the individual is less well or that he/she is falling short of his/her potential for wellness. As long as wellness factors are more dominant than illness factors, the individual can maintain a wellness position on the health continuum, even though it is not a high level of wellness. By an analysis of which and how many wellness tasks need to be completed at each stage, it should be possible to identify the events or factors that move an individual down the health continuum towards illness. In this way, it might be possible to identify those wellness factors that are absent in an ill or unwell person.

TABLE 1
Relationship Between Developmental Tasks and Wellness Tasks for Each Stage of Life Cycle

*Erikson's Eight Stages of Man**	*Havighurst's Developmental Tasks***	*Examples of Minimal Wellness Tasks for Each Developmental Stage*
I. Infancy (Trust vs. Basic Mistrust)	I. Infancy and Early Childhood • learning to walk • learning to take solid foods • learning to talk • learning to control elimination of body waste	• ability to perform psychomotor skills • learning functional definition of health • learning social and emotional responsiveness to others and to the physical environment
II. Early Childhood (Autonomy vs. Shame and Doubt)	• learning sex difference and sexual modesty • achieving physiological stability • forming simple concepts of social physical reality • learning to relate oneself emotionally to parents, siblings, and other people • learning to distinguish right and wrong, and developing a conscience	• learning about proper foods, exercise, and sleep • learning dental hygiene
III. Late Childhood (Initiative vs. Guilt)	II. Middle Childhood • learning physical skills necessary for ordinary games • building wholesome attitudes toward oneself as a growing organism • learning to get along with mates	• refining psychomotor and cognitive skills • developing self-concept • learning attitudes of competition and cooperation with others • learning of social, ethical, and moral differences and responsibilities
IV. Early Adolescence (Industry vs. Inferiority)	• learning an appropriate masculine or feminine role • developing fundamental skills in reading, writing, and calculating • developing concepts necessary for everyday living • developing conscience, morality, and a scale of values • achieving personal independence • developing attitudes toward social groups and institutions	• learning that health is an important value • learning the self-regulation of basic physiological needs—sleep, rest, food, drink, and exercise • learning risk-taking and its consequences

*Erikson's Eight Stages of Man**	*Havighurst's Developmental Tasks***	*Examples of Minimal Wellness Tasks for Each Developmental Stage*
V. Adolescence (Identity vs. Role Confusion)	III. Adolescence • achieving new and more mature relations with age mates of both sexes • achieving a masculine or feminine social role • accepting one's physique and using the body effectively • achieving emotional independence of parents and other adults • achieving assurance of economic independence • selecting and preparing for an occupation • preparing for marriage and family life • developing intellectual skills and concepts necessary for civic competence • desiring and achieving socially responsible behavior • acquiring a set of values and an ethical system as a guide to behavior	• learning economic responsibility • learning social responsibility for self and others • experiencing social, emotional, and ethical commitments to others • accepting oneself and one's physical development • reconciling discrepancies between personal health concepts and observed health behavior or others • learning to cope with life events and problems • consideration of life goals and career plans and acquiring necessary skills to reach the goals • learning the importance of time to self and the world • experiencing degrees of structure or flexibility in social institutions and interpersonal relationships
VI. Early Adulthood (Intimacy vs. Isolation)	IV. Early Adulthood • selecting a mate • learning to live with a marriage partner • starting a family • rearing children • managing a home • getting started in an occupation • taking on civic responsibility • finding a congenial social group	• commitment to marriage partner and assumption of long-term responsibilities for family • selecting a career • commitment to membership in social groups and organizations • incorporating health habits and practices into life style • learning the importance and place of noncommitment

VII. Middle Adulthood (Generativity vs. Stagnation)	V. Middle Age	• achieving adult civic and social responsibility • assisting teenage children to become responsible and happy adults • establishing and maintaining an economic standard of living • developing adult leisure time activities • relating oneself to one's spouse as a person • accepting and adjusting to the physiological changes of middle age • adjusting to aging parents	• acceptance of aging of self and others • coping with pressures of social and occupational responsibilities and mobility • recognizing the importance of good health habits and practices • periodic personal reassessment of life goals
VIII. Maturity (Ego Integrity vs. Despair)	VI. Later Maturity	• adjusting to decreasing physical strength and health • adjusting to retirement and reduced income • adjusting to death of spouse • establishing an explicit affiliation with one's age group • establishing satisfactory physical living arrangements	• becoming aware of risks to health and adjusting life style and habits to cope with risks • adjusting to loss of job, income, and family and friends through death • redefining self-concept • adjusting to changes in personal time and new physical environments • adjusting of previous health habits to current physical and mental capabilities

---

*E. Erikson, *Childhood and Society,* 2nd ed. New York, W. W. Norton & Co., 1963.

**R. Havighurst, *Developmental Tasks and Education.* New York, Longmans, Green, 1960.

Wellness thresholds

The completion of developmental tasks, the absence of clinical disease and the social environment all interact to produce a threshold for wellness that is present throughout an individual's life. The individual must be able to recognize the components of wellness and to pursue them actively if he/she is to experience more than good health.

Why do some individuals or families pursue activities that promote wellness, avoid those that are thought to be illness-causing and in general follow a lifestyle that permits them to enjoy life at its fullest? Why do other individuals or families engage in behaviour that leads to good health only when symptoms of illness occur and then cease to continue this behaviour once good health has been regained? The difference between these two circumstances would seem to be in the personal value systems and attitudes toward risk-taking that the individuals have learned in the developmental process.

There can be no prototype of the well individual because individuals do not work towards, or experience, wellness in the same way. There are developmental tasks, however, that are found in all cultures. The teaching and learning of these tasks implicitly or explicitly convey how individuals living in various cultures regard health, i.e. the value they ascribe to health. Hence, there are health-related tasks that are cross-cultural. Individuals have varying wellness thresholds and experience wellness in different ways. Cultural patterns assist in shaping the uniqueness of the wellness process.

Everyone has a different potential for wellness, given their genetic inheritance and life circumstances. For example, an individual with a family history of coronary heart disease might have a high risk for this disease, but he/she would, none the less, have a wellness potential even though he/she might start at a different wellness threshold than would an individual who was without a family history of coronary heart disease. Similarly, individuals who suffer from an acute or chronic disease would have other wellness potentials. For example, the wellness threshold for a diabetic or a paraplegic would be different from the threshold for a person who does not have a chronic illness. The successful rehabilitation of a chronically ill person, so that he/she is self-sufficient and self-supporting, could be viewed as a minimal level of good health. The movement towards wellness of a chronically ill person might include (a) developing his/her full potential as a person, given his/her physical limitations; (b) improving his/her behaviour relative to his/her fragile health condition so as to minimize future risks; and (c) expanding his/her self-sufficiency to accomplish what he/she believes to be important in his/her life. Maximal potentials for wellness must be left to each individual to define or determine. However, there are minimal wellness thresholds; these should be viewed as rights or potentials for everyone.

Learning wellness as one grows

Previously we observed that wellness is evident in some degree at each developmental stage and that it is not an ideal state or the culmination of a linear process of development. Beliefs, motives and behaviours associated with wellness are transmitted by the members of one generation to another through models and reinforcement. These influences are from family members and peers and, on a broader level, the community, mass media and the educational system.

Parental modelling plays a crucial role in the development of health behaviour. It has been shown that parents who behave in a consistently competitive and aggressive manner are likely to contribute to the development of coronary-prone behaviour in their children (19). Similarly, the development of behaviour related to smoking, lack of exercise and obesity could be learned through observation of parental patterns. Research about the establishment of self-reward standards has indicated that children tend to adopt standards of self-reinforcement that approximate those shown by their adult models. Thus, parental behaviour may determine the health-threatening patterns of self-reward, such as overeating. Although adult models exert a pervasive influence on children, parents are probably most influential when they "practice what they preach". Parents who say that sensible eating and exercise habits are important but do the opposite are apparently less successful in establishing in their children the sensible practices that they advocate than are those who are more consistent (19).

At the nonfamilial level, media models have also been shown to teach or to reinforce behaviour that has been linked to certain diseases. For example, an increased incidence of coronary heart disease has been linked to type-A behaviour; the frequency of the themes of achievement in children's books has been correlated with mortality rates from various types of heart disease in 21 countries. Significant correlations were found between the prominence of achievement themes and mortality rates from cardiovascular disease (19). Children also develop certain expectancies for success and personal control on the basis of school-related experiences. Generally, wellness behaviours are not explicitly identified or well modelled in children's educational experiences.

By the time an individual reaches adolescence and adulthood, a substantial portion of his/her health-related behaviour has already been established. As he/she grows, the individual assumes greater responsibility for his/her actions. In adulthood, physicians may become a substitute model for parents with respect to health behaviour. Physicians often adopt a parenting mode with respect to patients and thus appear to remove the final responsibility from the person for his/her own behaviour. People rarely see physicians except when they are sick, and there is little incentive to do more than what is required to regain good health. Individuals who perceive that they have some control over their own outcomes tend to be more receptive to health information and to engage in preventive health behaviours. There is also some evidence to indicate that persons with a high self-esteem are more likely to adopt preventive health measures (19). Thus, perceived internal control and adequate information about health and health-related activities increase the likelihood of personal growth and wellness behaviour. The problem, therefore, becomes one of identifying for individuals the degree to which they have completed the minimal wellness tasks at each developmental stage so that alternative modelling and self-reward standards can be presented if necessary.

Wellness as a value

Attempts to educate and motivate the public to engage in healthful practices are usually made at a point after personal value systems have become well established. These attempts are then usually directed towards preventing a single disease, rather than viewing health in positive terms and as a whole (28). Behaviour modification has been shown to be effective in altering some health habits (29); how lasting these changes will be, however, is not yet known. This would seem to be a band-aid approach to alter quickly habits that have become satisfying and well entrenched in an individual's life. Wellness itself has not yet become highly valued and thus most people have little understanding of what they can do to experience it.

Although wellness is an individual personal responsibility, the tasks it requires of the individual are determined by the larger social system. If society does not enhance or support the completion of wellness tasks, it will be difficult for individuals to maintain the proper motivation to develop a complete sense of wellbeing (30). Widespread changes are needed in our social system to discourage those factors that work against the value of wellness. Much remains to be done to determine whether the wellness of individuals can be encouraged by using personal growth techniques and, if so, how a strategy can be developed that would enable a national wellness programme to become a major force in the nation's health (8).

In addition, health professionals must learn to serve as models for wellness behaviour. Our health care delivery system is one in which the economic motivation is at least equally as strong as the service motivation. In any case, an individual's economic resources determine how well he/she uses the system and how much health care is available to him/her. In health care, dollars are destiny. There is no such incentive as yet in our society for individuals to become well.

REFERENCES

1. Palmore, E. Health practices, illness and longevity. In: Palmore, E. & Jeffers, F.C., ed. Prediction of life span. Lexington, MA, Lexington Books, 1971.
2. Palmore, E. The relative importance of social factors in predicting longevity. In: Palmore, E. & Jeffers, F.C., ed. Prediction of life span. Lexington, MA, Lexington Books, 1971.
3. Belloc, N.B. Relationships of health practices and mortality. Preventive medicine, 2: 67-81 (1973).
4. Burns, C.R. Diseases versus healths: Some legacies in the philosophies of modern medical science. In: Engelhardt, H.T. & Spicker, S.F., ed. Evaluation and explanation in the biomedical sciences. Dordrecht, Netherlands, D Rediel, 1975.
5. White, L.S. How to improve the public's health. New England journal of medicine, 293: 773-774 (1975).
6. Lalonde, M. A new perspective on the health of Canadians: a working document. Ottawa, National Health and Welfare, 1974.
7. Forward plan for health: FY 1977-81. Public Health Service, Washington DC, 1975 (DHEW Publication, No. OS 76-50025).
8. Mico, P.R. & Ross, H.S. Health education and behavioural science, 1st ed. Oakland, CA, California Third Party Associates, 1975.
9. Milio, N. 9226 Kercheval: the storefront that did not burn. Ann Arbor, MI, University of Michigan Press, 1970.
10. Lerner, M. Conceptualization of health and social well-being. In: Berg, R.L., ed. Health status indexes. Chicago, IL, Hospital Research and Educational Trust, 1978.
11. Goldstein, K. Health as value. In: Maslow, A.H., ed. New knowledge in human values. New York, NY, Harper & Bros., 1959.

12. Terris, M. Approacnes to an epidemiology of health. *American journal of public health*, *65*: 1037-1045 (1975).
13. Baumann, B. Diversities in conceptions of health and physical fitness. *Journal of health and human behaviour*, *2*: 39-46 (1961).
14. Freidson, E. *Profession of medicine*. New York, NY, Dodd, Mead, 1970.
15. Rokeach, M. Change and stability in American value systems, 1968-1971. *Public opinion quarterly*, *38*: 222-238 (1974).
16. Jourard, S.M. *The transparent self*, 2nd ed. New York, NY, Van Nostrand Reinhold, 1971.
17. Dunn, H.L. High-level wellness for man and society. *American journal of public health*, *49*: 786-792 (1959).
18. Maslow, A.H. *Toward a psychology of being*, 2nd ed. New York, NY, D. Van Nostrand Co., 1968.
19. Stokols, D. The reduction of cardiovascular risk: an application of social learning perspectives. *In*: Enelow, A.J. & Henderson, J.B., ed. *Proceedings of conference, Seattle, Washington, June 17-19, 1974*. New York, American Heart Association, 1975.
20. Williams, A.F. & Wechsler, H. Dimensions of preventive behavior. *Journal of consulting and clinical psychology*, *40*: 420-425 (1973).
21. Jourard, S.M. *Healthy personality: an approach from the viewpoint of humanistic psychology*. New York, NY, Macmillan, 1974.
22. Belloc, N.B. & Breslow, L. Relationship of physical health status and health practices. *Preventive medicine*, *1*: 409-421 (1972).
23. Erikson, E.H. *Childhood and society*, 2nd ed. New York, NY, W.W. Norton & Co., 1963.
24. Parcel, G.S. *Skills approach to health education: a framework for integrating cognitive and affective learning*. Presented at the American School Health Association meeting, Denver, October 1975.
25. Havighurst, R. *Developmental tasks and education*. New York, NY, Longmans, Green, 1960.
26. Berg. O. Health and quality of life. *Acta sociologica*, *18*: 3-22 (1975).
27. Holmes, T.H. & Rahe, R.H. The social readjustment rating scale. *Journal of psychosomatic research*, *11*: 213-218 (1967).
28. Suchman, E.A. Preventive health behavior: a model for research on community health campaigns. *Journal of health and social behaviour*, *8*: 197-209 (1967).
29. Pomerleau, O. et al. Role of behavior modification in preventive medicine. *New England journal of medicine*, *292*: 1277-1282 (1975).
30. Kirk, et al. *Personal health in ecologic perspective*. St. Louis, MO, C.V. Mosby, 1972.

II. REFOCUSING PROBLEMS FOR HEALTH

CHANGING LIFESTYLES TO IMPROVE HEALTH[*]

by
Robert J. Haggerty

Introduction

> "Men as a rule find it easier to depend on healers than to attempt the more difficult task of living wisely".
>
> - Dubos (1)

One's lifestyle, including patterns of eating, exercise, drinking, coping with stress, and use of tobacco and drugs, together with environmental hazards, are the major known modifiable causes of illness in America today. Medical care, on which we spend so much has, in comparison, only a weak effect on health. In addition, the way people use health services for both acute and chronic sickness is often inappropriate, costly, and ineffective. Education to alter personal lifestyle and illness behaviour has quite naturally been advocated with increasing frequency as an "idea whose time has come" (2). But the evidence of successful health education is, at best, modest. The problem is that health habits deal with all of life. To change all of life is difficult, especially when there are enormous social pressures that stimulate and reinforce harmful habits. Changing lifestyle is also difficult because health is not necessarily man's highest value. "While health values are high, it is easy to underestimate the attractiveness of other social values in the lives of men: wealth, power, love, prestige, knowledge, beauty, security, acceptance. The value of health may come in conflict with, or fail to accommodate conveniently to the pursuit of these other values" (3). In addition to individual competing values, forces beyond the individual which we vaguely label social such as television and other mass media; corporate decisions on products, prices and work conditions; special interest lobbies; government decisions on such matters as taxes, farm support, and public transportation; and local community action on programmes such as bike paths and recreational facilities are all powerful factors affecting lifestyle. If we wish to change lifestyles and reduce hazardous environments we must generally use a combination of methods rather than rely only on health education, important as that one method may be. This combination of methods will include education based on social learning theory, new technology wherever possible to bypass hazards, tax incentives, laws to change behaviour, and local community and consumer political action to change social structures. The bases for these assertions need to be reviewed and documented.

Relation of lifestyle and health habits to health and illness

The assertion that health is highly related to lifestyle is based largely on correlational data (4,5). There are a large number of studies linking social class to mortality and morbidity. (It is no great leap of faith to assume that social class is largely a proxy measure for lifestyle or health habits.) Income, occupation, and education, which are the major components of most measures of social class, are also each generally positively correlated with health status (i.e., negatively with mortality and morbidity). Differences in different countries with similar standards of living and different lifestyles are another bit of evidence. For instance, death rates for males aged 45-54 years in the United States are almost double those in Sweden. Racial differences in the frequency of many diseases, while sometimes hereditary in etiology, are more often the result of different lifestyles, since most disease rates are highly variable within the same race, according to education and income.

---

[*] This article was published in Preventive medicine, 6: 276-289 (1977).

Still another type of study, and one of the few linking general functioning or vigour to lifestyle, demonstrated that men of age 55 who had none of the "bad" habits, excessive eating, being overweight, having high alcohol ingestion, cigarette smoking, and getting inadequate sleep and exercise, functioned as well or were as healthy as men 20 years their junior (i.e., 35 years old) who had all of these "bad" habits (6).

Many specific diseases have been linked with habits: cigarette smoking to cancer of the lung as well as emphysema; overeating and its consequent overweight to heart disease; anaemia to iron-deficient diet; overuse of alcohol to cirrhosis of the liver; risk-taking driving and nonuse of seat belts to injuries in auto accidents; early multiple sexual contacts to cancer of the cervix (7); promiscuous sexual behaviour to venereal disease; drug-taking to addiction; and refined sugar use to dental caries. Less clear-cut, but perhaps even more all-pervasive in causing disease, is the relation of life stress or the manner of coping with stress to the onset of a host of diseases, both chronic and acute (8), and also with the manner in which people use health services.

Rarely has an intervening agent been found to explain the process by which health habits might cause physiological change, although it is clear with all these examples that one or more intervening agents or physiological processes need to be found to understand how habits and health are linked. If such links are found, it is hoped shortcuts to prevention may be achieved without the more difficult task of changing habits (e.g. removal of the "toxic" agent from cigarettes rather than trying to stop people from smoking).

Efforts to change these behaviours to more healthy lifestyles have placed major faith on health education as the method to achieve such change. It seems worthwhile to review the efficacy of this field to change the behaviours.

Empirical studies of health education

For over a century there has been considerable energy put into education of the public about illness and how to stay healthy. It is likely that some of this effort has had considerable impact (i.e. Spock's child care book), but a careful review of a large amount of literature leaves one with only a few studies meeting two criteria: (a) that change in behaviour rather than knowledge or attitudes be the end result of the intervention, and (b) that rigourous research methods with controls or at least good comparison be used. When such rigorous criteria are used few health education programmes have shown much effect on behaviour, reminiscent of medical care studies which, when well controlled, show little effect on health! There have been excellent periodic reviews of the field of health education by Young in Health education monographs, a journal of the Society for Public Health Education and a comprehensive evaluation by Green (9), but they leave an outsider with the conclusion that, at best, changes in behaviour have been less than promised in most, if not all, cases. If all is so bleak, why pursue the subject? The purpose of this review is to give a very selective picture of what has been achieved by health education, to temper unrealistic expectations, and to point to some very hopeful ways that health habits can be changed. Whole areas of related importance have been eliminated, such as patient education, studies of compliance with medical regimens, studies of methods and effects of innovation used in developing countries, and the specific role of mass media. The somewhat greater success achieved in patient education programmes (10) than in those aimed at the not-yet-sick general public lies in large part in the higher motivation of the already sick patients to change their behaviour. Indeed it is the stimulus needed to develop motivation that seems to be lacking in most health education programmes. From this limited review I will suggest how a public policy might develop to achieve such motivation to change lifestyles.

Selected examples of health education

Most health education in the past has relied on knowledge transfer to achieve change in behaviour and most has been unsuccessful. The following are typical examples.

Accidents are a medical problem of great importance deserving the large effort spent on education to prevent them. The results are discouraging. One very sophisticated experiment with emotionally gripping spot announcements on cable television with carefully controlled populations showed no change in viewers' behaviour (11). Only rarely has information transfer increased desired behaviour (12) and significantly in this study, the paediatrician used his "authority" and relation to the mother in addition to information transfer to increase the use of seat belts.

Many studies in several other areas have also shown little or no effect of passive transfer of information on health behaviour. A very well done study evaluated a cleverly designed pamphlet, "Pierre the pelican" (11). These pamphlets were designed to change child-rearing behaviour of mothers. Although there were some minor differences in subsequent behaviour (nonwhite mothers did foster more independence in their babies as advised), other behaviours went against the message. Overall, no changes in behaviour occurred after exposure to the message when compared with controls. As Greenberg says, "... the alteration of established patterns of behaviour may be too much to expect from a single instrument" (13). One could ask whether or not the problem is to design more attactive, attention-getting, powerful materials. While the media can always be improved, a review of the existing methods already developed which have changed behaviour so little leads me to believe the answer has to be in different approaches, not better media.

Since the classic study of Lewin (14) health educators have emphasized the need for active involvement in the learning process if behaviour change is desired. In that study seminar learning and public acceptance of a new diet resulted in a greater change in food habits than passive learning. Public expression of beliefs not shared by the speaker has also been found to change behaviour. In one experiment people were asked to develop and give a public speech on a subject, taking a position with which they disagreed (role playing). Such people changed their behaviour more than those who heard the talk (15). They convinced themselves! The use of these principles is still all too infrequent in health education programmes, not because they are not well recognized by health educators, but because resources (time and money) have rarely been available on a scale necessary to achieve such change.

Education to curb smoking should be a fruitful field in which to apply these principles of achieving learning. Probably no habit is more clearly proven to be harmful to the health of large numbers of people than smoking. Many programmes to educate people to the hazards of smoking have been implemented since the Surgeon General's report on the consequences of smoking in the mid-1960s. It is not fair to say there has been no success, for among men, over 50% smoked cigarettes in 1960 while in 1972 only 40% do. But success has been limited largely to the motivated and even here is not great. In a careful review of the literature (16) counselling of various types for those who completed half or more of the sessions resulted in 30% having ceased smoking one year later (compared with control rates of about 16-19%). Seventh Day Adventists report greater success among participants of 5-day sessions (not all of whom are religious adherents to this faith). The reasons for their success seem clear. They start with motivated people, and the real challenge is to develop motivation to change behaviour. In addition, however, the programmes use more than information transfer, including group discussions, models of nonsmoking behaviour among the teachers, self-reinforcement ("I choose not to smoke"), and a buddy system reinforcement with follow-up calls each day after the course. Of those who complete the programme, 63% are reported to have stopped smoking after 18 months, and 35-40% after two years (but there were no controls).

From these and other studies in changing habits one has to conclude that behaviour change can occur but it requires more than passive information transfer, and even with the most successful techniques, such as group discussions and public affirmation, one has to be content with modest changes in behaviour unless there is strong motivation and social group reinforcement.

Theoretical bases of health education

In a review of health education, one finds extensive literature on health and illness behaviour. These studies have recently been ably summarized (17). They seek to explain why people behave as they do in regard to health (actions taken to stay healthy) or illness (actions taken to seek care once sick). Several models have been developed each of which includes a large number of factors found to correlate with behaviour. But when tested empirically the overall amount of behaviour explained by any one or even all of these factors is small. In addition the demographic and therefore less modifiable characteristics (such as marital status, family size, maternal education, race, occupation, etc.) are usually found to be much more highly correlated with health behaviour than the potentially more modifiable social-psychological variables (health beliefs, scepticism, dependency, knowledge of illness, group support, perceived seriousness of the illness, perceived vulnerability, potential benefit of the action, and readiness to seek care).

There has been a dispute over whether or not there is a general personality type correlated with certain types of health behaviour. Unfortunately most data, especially in adults, suggests that there is not, but that each type of behaviour is relatively independent (i.e., one who does not smoke may be a high risk-taking auto driver). An exception to this view is Gochman (18) whose studies indicate that there are children with more general preventive orientation and behaviour. A recent study of illness behaviour in children supports the idea that there is a general type of personality (strong ego internally directed) that is correlated with infrequent use of health services (19). If there is a general personality type related to these behaviours it is more likely the relation of ego strength to the way one uses health services than any relation to health habits.

The generally unsatisfactory outcome of health education programmes, especially for changing adult behaviour, has naturally led many to suggest that we must move back in time and start health education with children. This assumption that behaviour is more easily controlled or developed in children than in adults underlies the emphasis on preventive approaches for children among health educators. Many school systems now have compulsory health education courses from kindergarten through high school based on this belief (California and New York). But there are many questions as to the validity of the "blank sheet" phenomena. Prevention in children may be as complex and difficult as changing adult behaviour. Also there is little data on the durability, stability, and transferability of behaviour from childhood to adulthood. Basic to any attempt to promote health education in children is the need to know when children develop concepts of health, illness, causation, and prevention of disease, if one is to build a rational programme. But there are very few studies on when children learn about health and illness, or how they learn to take preventive actions (19,20).

The origin of health behaviour, and of course personality, in children continues to be debated. Common sense suggests that family models would be important. One study found high correlation between children's and mothers' immunization practice (21) and between education provided by the family and their health habits on a wide variety of dimensions (teeth care, sleep, exercise, cleanliness, nutrition, elimination, and smoking). This study also related the degree of autonomy permitted children and their habits and found "better" health habits among children whose parents permitted them considerable autonomy as opposed to those who maintained strict control.

In contrast, when Mechanic (22) examined the origins of children's illness behaviour and found that while there was a positive correlation between mother's use of health services and their children's, the strength of the relation was smaller than anticipated; only 7% of the variance was explained by this factor. Thus while family behaviour is obviously important in establishing children's health behaviour, it may be less important in illness behaviour. This seems logical, for the models of lifestyle such as smoking, exercise, and eating are easily visible in the family and reinforce behaviour much more often (even daily) than illness behaviour, which is often out of sight and not very frequent anyway. If it can be shown that children learn lifestyles in good part at home, that begs the question of how to influence or change their behaviour, for we still have to influence adults in some ways to provide the models.

From this short review of theory we are unfortunately left with little on which to base more successful programmes. But social learning theory, if fully applied in experiments in health education, should be a more powerful tool to change health behaviour. It also seems clear that other methods may have to be used to change unhealthy lifestyles.

Other methods to change behaviour: "managerial prevention" through external controls, laws, and technological "bypass"

There is no doubt but that the most successful programmes to change behaviour and improve health to date (and certainly the cheapest) have been a variety of external controls or laws placed upon people. While not all of these examples are from well controlled studies, some are so dramatic (i.e., the reduction in fatal auto accidents in the United States following the lowering of the speed limit to 55 mph in 1974) that controlled trial data seem unnecessary and would be impossible to obtain. A successful example of the use of technology to bypass health hazards is fluoridation of public water supplies to reduce caries rather than relying on education in diet and hygiene; others are fire-grills mandated for fireplaces in England to prevent children's clothes from catching on fire, and the use of child-proof medicine bottles to prevent accidental poisoning in the United States. Both measures have been very successful. There are also important failures of laws such as prohibition of alcohol and laws against drunken driving. To a degree, people must be ready to accept a law. When they are, the evidence seems conclusive. If we can bypass human motivation with technology or with laws that people will obey, we can be reasonably successful in changing behaviour. The problem is that we have so few successful technological or legal bypasses.

Side effects

Medicine has gradually recognized that most actions have a price, not merely in dollars and cents, but in unforeseen and unwanted side effects. The same question needs to be asked about health education and other efforts to change lifestyles. What are the costs and benefits and are there likely to be undesirable side effects? This question needs to be asked especially since there have been so few positive benefits demonstrated to date. Such side effects have rarely been mentioned in empirical studies and must be largely speculative. Rarely are even the dollar costs of the programmes detailed.

Most worrisome is the issue of control versus autonomy. It is a general belief in western democracies that people will be better off if they have autonomy over their own lives, including health affairs. An informed person should be able to make decisions affecting his own health, to cope, to adapt, and to relate to others. These are the highest goals of health education. But to date we have had much more success through bypassing of individual decisions by technology or laws. We should be cautious about placing all our faith in these external controls of behaviour, for the side effects may be loss of individual understanding, ability to make choices, and future adaptability. The question is whether the benefit is worth the price. Neither extreme is ideal. At least future studies in health education should assess such costs and side effects.

What are some answers?

If health education, as it has been practised, has had so little effect, what might be more successful methods? The following are offered as partial answers. They are not new, but the task is to put these principles together into a coherent programme rather than in isolated bits and pieces, as has been the case, to evaluate their effectiveness and to support those proven to be effective.

Work with self-help movement and social groups

Within the past decade a variety of alternatives has developed to traditional health education (defined here as what the health professional does directly to educate people to lead healthy lives). Such diverse "movements" as the women's movement (especially the health components, "Our Bodies Ourselves"); consumer groups, including the Citizen Action Groups and the Urban Coalition (especially the health programmes); storefront clinics; commune self-managed health programmes; and the demystifying of medicine movement of Illich (23); all share, with the historical past of the populist movement and of other self-improvement groups, the grassroots origin and personal involvement that has been so lacking in most professionally led health education, as well as an interest in health. The whole idea of professional control, which is necessary at the emergency surgery end of the spectrum of medical care, is probably inimical to success in changing another person's health habits. Health education efforts should combine with these social groups to effect changes in lifestyle.

Use of clinician's setting

Efforts at health education in clinicians' offices are more likely to be successful than others because of the attention to health and the motivation to do something about it that has been generated by the visit. In addition to education about changing lifestyle, clinicians could educate families to use services more parsimoniously and appropriately for minor problems. Some physicians have used this approach successfully (24), but some incentive such as insurance rebates at the end of the year for low use will need to be built in to reinforce such behaviour. The success of the seat belt study in the private paediatrician's office (12) suggests that more effort should be expended in clinial practice in health education. Special project funding to clinicians to develop, evaluate, and use new educational methods in their offices needs to be built into any health insurance programme. A central group to develop materials would be of great help.

It also seems likely that development of human resource centres where people could receive a variety of services including health, recreation, education, child care, and other needed services (like the Peckham Experiment, England) would be more effective settings in which to combine health services and health education with social group reinforcement.

There seems to be a great amount of interest among the public in health today. It may be one of those points in history when people are questioning their lifestyles and are more prepared to change to healthier ones than the pessimistic results of previous attempts at health education would suggest. But health education must move out of the traditional places where it has worked, such as schools, into a whole new range of social groups and clinical settings and use new techniques to effect behaviour change.

Mass media

A word needs to be said about television and other mass media. There is no doubt that they are potent forces in transferring information, developing motivation, and possibly even changing behaviour. But the evidence that they have been very successful in changing health habits is small. Only recently have large-scale and sophisticated efforts been made and the results were not very successful.

It is reasonable to expect greater success, however, with integration of mass media efforts with personal follow-up, including discussions in social groups and schools, call-in questions to local panels of experts after the programmes, and discussion with their own clinicians of the topics raised by the media. A large-scale integrated programme of this sort is currently being conducted by Stanford University in an effort to change health habits in three communities in relation to coronary heart disease. It is also one of the few projects to be carefully evaluated, a much neglected aspect of most media studies. Preliminary results are very encouraging that change can occur but until these efforts are completed we have to be reasonably sceptical of the effectiveness of mass media alone in changing health habits.

Managerial prevention

It seems from the at-best-limited success of health education and the few, but more successful preventive measures, achieved in the past through external controls (fire-grills, speed limits, etc.), that such controls on behaviour are necessary, either alone, or better, in conjunction with educational programmes. We know very little about how to apply taxes, technology, and laws to change health habits. Each new programme should have some sort of evaluation built in to make the experience produce cumulative knowledge. But the following methods could be part of a coherent strategy to change health habits.

Taxation. This can be a potent deterrent to excessive use of tobacco or alcohol, but the extra tax needs careful adjustment to avoid too great incentive to black markets and smuggling. Extra taxes on grain-fed meat, sweets, and sugar-containing soft drinks might cut consumption of those items as well.

Laws. Laws to require technological bypasses to hazardous behaviour need to be developed or implemented; e.g., required use of air bags or automatically locking seat belts. Legal control of behaviour has a role. But the behaviour one wants to control should be carefully selected and the law should be well enforced (e.g. enforcing drunk driving and speed limit statutes).

Direct payment incentives. These need more trial. For example, "maternity benefits" for registering for prenatal care before the third month of pregnancy could be developed, as is done in Finland, to induce more appropriate use of health services. Some disincentives might be tried, such as charging a patient a premium for medical care that was delayed or that is due to one's own negligence, although such disincentives seem unlikely in the current culture.

Life insurance premium reduction. Incentives of this sort could be used to change lifestyle; e.g., lower rates for maintaining weight within certain limits or not smoking. Health insurance should also pay for education projects aimed at changing lifestyle within practice settings.

Changes in occupational and school environments. Changes here offer especially attractive sites to improve health. Both sites have large numbers of captive populations. Both could be given incentives (tax reduction for industry, grants for schools) if hazards were removed, restricted smoking areas were provided, time was taken for group health education and relaxation (which has been demonstrated in one study to reduce blood pressure), cafeterias served less sugar and fat in meals, and management were challenged, with incentive, to improve the health habits of employees.

The sceptic might well ask what is the evidence that these methods will work any better than education? Perhaps we are exchanging one only modestly successful programme for another. In some examples (speed limits) the answer is fairly dramatic but since there have been so few systematic attempts to control health habits by these approaches, no final answer can be given. There is considerable evidence, however, that such external controls can be a powerful force in initiating motivation, the missing ingredient in so much of health education. With a maternity benefit for early prenatal care or strict enforcement of speed limits, the desired behaviour is made explicit and many people (but not all, of course) are alerted and motivated to perform accordingly.

Public policy

It is clear from examples given above that enormous policial problems exist in achieving policy changes. Vested business interests would be challenged and some time would be needed for the change (if, for example, a gradual increase in taxes on tobacco or alcohol were to be phased in) to minimize dislocations in the work force in these industries. Support for technology to circumvent the dangers of any behaviour (identification and removal of the agent in tobacco causing cancer) should have high priority in research funding, for whenever such a shortcut can be found, it is likely to be the most successful way to promote health.

In addition, the Bureau for Health Education should seek out social groups that are likely to be good vehicles for education. Subsidizing their activities in health education would help get them interested. Health educators should work on a detached status with groups, for it has been shown (25) that they can generally have a greater effect by this means than by providing direct educational services to individuals. Health professionals should get their messages to writers of commercial as well as public television and into print and mass media material. Subsidization from health insurance premiums for patient education efforts in the clinical setting, first on a project basis to avoid excess activity that could be of little value, would be useful. The point is that a coherent strategy needs to be developed involving all the ways to change behaviour but to recognize that the approach will differ for different behaviours one wants to change.

One important role, for bodies spanning the public and private sectors, is to set up relations with industry and government to examine with them the impact which their decisions on new products, laws or policies may have on unhealthy lifestyle as well as on environment. A unified health policy unit in government should be able to advise politicians of the potential ill effects of their actions on such topics as family mobility, working hours, lifestyle, and health. The national health education centre should develop a "lifestyle impact" group to ascertain the effect of decisions in these social organizations on lifestyle, much as the environmental impact groups.

In sum, the need is for a programme of many parts. Reliance on only one method, or the lack of a coordinated programme to affect health habits is likely to lead to continued pessimism about the ability of people to change. Realism rather than pessimism is the appropriate stance.

REFERENCES

1. Dubos, R. The mirage of health: utopias, progress and biological change. New York, Doubleday, 1961.
2. Somers, A. Editorial: Recharting national health priorities: a new Canadian perspective. New England journal of medicine, 291: 415-416 (1974).
3. Davis, F. Passage through crisis: polio victims and their families. New York, Bobbs Merrill, 1963.
4. Kosa, I. et al. Poverty and health: a sociological analysis. Cambridge, MA, Harvard University Press, 1969 (see especially Lerner, M. Poverty and physical disease, Chap. III, pp. 69-112).

5. Powles, J. On the limitations of modern medicine. Sci. Med. Man., 1: 1-30 (1973).
6. Belloc, W.B. & Breslow, L. Relationship of physical health status and health practices. Preventive medicine, 1: 409-421 (1972).
7. Rotkin, I.D. A comparison review of key epidemiological studies in cervical cancer related to current searches for transmissible agents. Cancer research, 33: 1353-1367 (1973).
8. Dohrenwend, B.S. & Dohrenwend, B.P., ed. Stressful life events, their nature and effects. New York, Wiley Interscience, 1974.
9. Health promotion and consumer health education - preventive medicine U.S.A. Task force report sponsored by the Fogarty Center and the American College of Preventive Medicine. New York, Prodist, 1976.
10. Johnson, J.E. & Leventhal, H. Effects of accurate expectations and behavioral instructions on reactions during a noxious medical examination. Journal of personality and social psychology, 29: 710-718 (1974).
11. Robertson, L.S., et al. A controlled study of the effect of television messages on safety belt use. American journal of public health, 64: 1071-1080 (1974).
12. Bass, L.W. & Wilson, T.R. The pediatrician's influence in private practice, measured by a controlled seat belt study. Pediatrics, 33: 700-704 (1964).
13. Greenberg, B.G. et al. A method for evaluating the effectiveness of health education literature. American journal of public health, 43: 1147-1155 (1953).
14. Lewin, K. Group decision and social change, In: Maccoby, E.E., et al., ed. Readings in social psychology. New York, Holt, Rinehart & Winston, 1958.
15. Janis, I.L. & King, B.T. The influence of role playing in opinion change. In: Maccoby, E.E. et al., ed. Readings in social psychology. New York, Holt, Rinehart & Winston, 1958, pp. 472-482.
16. Schwartz, J.L. A critical review and evaluation of smoking control methods. Public health report, 84: 483-506 (1969).
17. Becker, M.H., ed. The health belief model and personal health behaviour. Health education monographs, 2: 324-473 (1984).
18. Gochman, D.S. The organizing role of motivation in health beliefs and intention. Journal of health and social behaviour, 13: 285-293 (1972).
19. Lewis, C.E. et al. Child-initiated care: a study of the determinants of the illness behaviour of children. Mimeo, 1975.
20. Gellert, E. Children's conception of the content and functions of the human body. Genetic psychology monographs, 65: 293-405 (1962).
21. Pratt, L. Child rearing methods and children's health behaviour. Journal of health and social behaviour, 14: 61-69 (1973).
22. Mechanic, D. The influence of mothers on their children's health attitudes and behaviour. Pediatrics, 33: 444-453 (1964).
23. Illich, I. Medical nemesis. Lancet, 1: 918-921 (1974).
24. Somers, H.R. Community health education: a challenge to hospital and medical staffs. Journal of the Medical Society of New Jersey, 70: 943-948 (1973).
25. Cebalero, A. Demonstration of approaches to health education. Final report to HEW, 1971.

SICK INDIVIDUALS AND SICK POPULATIONS[a]

by
Geoffrey Rose

The determinants of individual cases

In teaching epidemiology to medical students, I have often encouraged them to consider a question which I first heard enunciated by Roy Acheson: "Why did this patient get this disease at this time?". It is an excellent starting-point, because students and doctors feel a natural concern for the problems of the individal. Indeed, the central ethos of medicine is seen as an acceptance of responsibility for sick individuals.

It is an integral part of good doctoring to ask not only, "What is the diagnosis, and what is the treatment?" but also, "Why did this happen, and could it have been prevented?". Such thinking shapes the approach to nearly all clinical and laboratory research into the causes and mechanisms of illness. Hypertension research, for example, is almost wholly preoccupied with the characteristics which distinguish individuals at the hypertensive and normotensive ends of the blood pressure distribution. Research into diabetes looks for genetic, nutritional and metabolic reasons to explain why some people get diabetes and others do not. The constant aim in such work is to answer Acheson's question, "Why did this patient get this disease at this time?".

The same concern has continued to shape the thinking of all of us who came to epidemiology from a background in clinical practice. The whole basis of the case-control method is to discover how sick and healthy individuals differ. Equally the basis of many cohort studies is the search for "risk factors", which identify certain individuals as being more susceptible to disease; and from this we proceed to test whether these risk factors are also causes, capable of explaining why some individuals get sick while others remain healthy, and applicable as a guide to prevention.

To confine attention in this way to within-population comparisons has caused much confusion (particularly in the clinical world) in the definition of normality. Laboratory "ranges of normal" are based on what is common within the local population. Individuals with "normal blood pressure" are those who do not stand out from their local contemporaries, and so on. What is common is all right, we presume.

Applied to etiology, the individual-centred approach leads to the use of relative risk as the basic representation of etiological force; that is, "the risk in exposed individuals relative to risk in non-exposed individuals".

---

[a] This article was published in International journal of epidemiology, 14(1): 32-38 (1985).

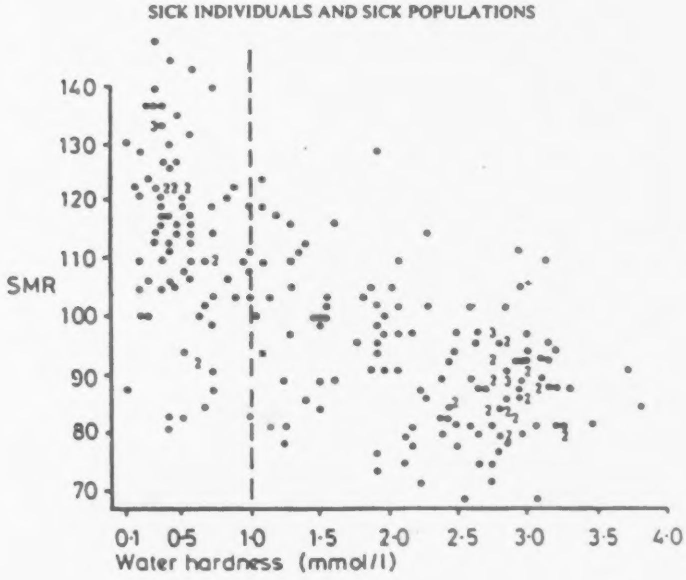
Indeed, the concept of relative risk has almost excluded any other approach to quantifying causal importance. It may generally be the best measure of etiological force, but it is no measure at all of etiological outcome or of public health importance.

Unfortunately this approach to the search for causes, and the measuring of their potency, has to assume a heterogeneity of exposure within the study population. If everyone smoked 20 cigarettes a day, then clinical, case-control and cohort studies alike would lead us to conclude that lung cancer was a genetic disease; and in one sense that would be true, since if everyone is exposed to the necessary agent, then the distribution of cases is wholly determined by individual susceptibility.

Within Scotland and other mountainous parts of Britain (Fig. 1, left section) there is no discernible relation between local cardiovascular death rates and the softness of the public water supply. The reason is apparent if one extends the enquiry to the whole of the UK. In Scotland, everyone's water is soft; and the possibly adverse effect becomes recognizable only when study is extended to other regions which have a much wider range of exposure (r = -0.67). Even more clearly, a case-control study of this question within Scotland would have been futile. Everyone is exposed, and other factors operate to determine the varying risk.

Epidemiology is often defined in terms of study of the determinants of the distribution of the disease; but we should not forget that the more widespread is a particular cause, the less it explains the distribution of cases. The hardest cause to identify is the one that is universally present, for then it has no influence on the distribution of disease.

Fig. 1. Relation between water quality and cardiovascular mortality in towns of the UK



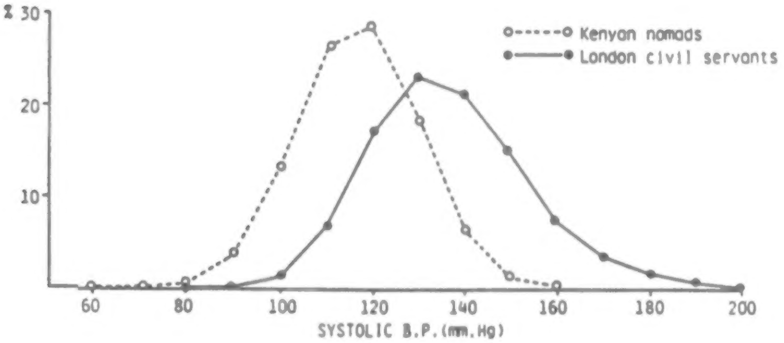
Source: Pocock et al. (1).

The determinants of population incidence rate

I find it increasingly helpful to distinguish two kinds of etiological question. The first seeks the causes of cases, and the second seeks the causes of incidence. "Why do some individuals have hypertension?" is a quite different question from "Why do some populations have much hypertension, whilst in others it is rare?". The questions require different kinds of study, and they have different answers.

Fig. 2 shows the systolic blood pressure distributions of middle-aged men in two populations - Kenyan nomads (2) and London civil servants (3). The familiar question, "Why do some individuals have higher blood pressures than others?" could be equally well asked in either of these settings, since in each the individual blood pressures vary (proportionately) to about the same extent; and the answers might well be much the same in each instance (that is, mainly genetic variation, with a lesser component from environmental and behavioural differences). We might achieve a complete understanding of why individuals vary, and yet quite miss the most important public health question, namely, "Why is hypertension absent in the Kenyans and common in London?" The answer to that question has to do with the determinants of the population mean; for what distinguishes the two groups is nothing to do with the characteristics of individuals, it is rather a shift of the whole distribution - a mass influence acting on the population as a whole. To find the determinants of prevalence and incidence rates, we need to study characteristics of populations, not characteristics of individuals.

Fig. 2. Distributions of systolic blood pressure in middle-aged men in two populations



Source: Shaper (2) and Reid et al. (3).

A more extreme example is provided by the population distributions of serum cholesterol levels (4) in East Finland, where coronary heart disease is very common, and Japan, where the incidence rate is low: the two distributions barely overlap. Each country has men with relative hypercholesterolaemia (although their definitions of the range of "normal" would no doubt disagree), and one could research into the genetic and other causes of these unusual individuals; but if we want to discover why Finland has such a high incidence of coronary heart disease we need to look for those characteristics of the national diet which have so elevated the whole cholesterol distribution. Within populations it has proved almost impossible to demonstrate any relation between an individual's diet and his serum cholesterol level; and the same applies to the relation of individual diet to blood pressure and to overweight. But at the level of populations it is a different story: it has proved easy to show strong associations between population mean values for saturated fat intake *versus* serum cholesterol level and coronary heart disease incidence, sodium intake *versus* blood pressure, or energy intake *versus* overweight. The determinants of incidence are not necessarily the same as the causes of cases.

How do the causes of cases relate to the causes of incidence?

This is largely a matter of whether exposure varies similarly within a population and between populations (or over a period of time within the same population). Softness of water supply may be a determinant of cardiovascular mortality, but it is unlikely to be identifiable as a risk factor for individuals, because exposure tends to be locally uniform. Dietary fat is, I believe, the main determinant of a population's incidence rate for coronary heart disease; but it quite fails to identify high-risk individuals.

In the case of cigarettes and lung cancer it so happened that the study populations contained about equal numbers of smokers and non-smokers, and in such a situation case-control and cohort studies were able to identify what was also the main determinant of population differences and time trends.

There is a broad tendency for genetic factors to dominate individual susceptibility, but to explain rather little of population differences in incidence. Genetic heterogeneity, it seems, is mostly much greater within than between populations. This is the contrary situation to that seen for environmental factors. Thus migrants, whatever the colour of their skin, tend to acquire the disease rates of their country of adoption.

Most non-infectious diseases are still of largely unknown cause. If you take a textbook of medicine and look at the list of contents you will still find, despite all our etiological research, that most are still of basically unknown etiology. We know quite a lot about the personal characteristics of individuals who are susceptible to them; but for a remarkably large number of our major non-infectious diseases we still do not know the determinants of the incidence rate.

Over a period of time we find that most diseases are in a state of flux. For example, duodenal ulcer in Britain at the turn of the century was an uncommon condition affecting mainly young women. During the first half of the century the incidence rate rose steadily and it became very common, but now the disease seems to be disappearing; and yet we have no clues to the determinants of these striking changes in incidence rates. One could repeat that story for many conditions.

There is hardly a disease whose incidence rate does not vary widely, either over time or between populations at the same time. This means that these causes of incidence rate, unknown though they are, are not inevitable. It is possible to live without them, and if we knew what they were it might be possible to control them. But to identify the causal agent by the traditional case-control and cohort methods will be unsuccessful if there are not sufficient differences in exposure within the study population at the time of the study. In those circumstances all that these traditional methods do is to find markers of individual susceptibility. The clues must be sought from differences between populations or from changes within populations over time.

Prevention

These two approaches to etiology - the individual and the population-based - have their counterparts in prevention. In the first, preventive strategy seeks to identify high-risk susceptible individuals and to offer them some individual protection. In contrast, the "population strategy" seeks to control the determinants of incidence in the population as a whole.

The "high-risk" strategy

This is the traditional and natural medical approach to prevention. If a doctor accepts that he is responsible for an individual who is sick today, then it is a short step to accept responsibility also for the individual who may well be sick tomorrow. Thus screening is used to detect certain individuals who hitherto thought they were well but who must now understand that they are in effect patients. This is the process, for example, in the detection and treatment of symptomless hypertension, the transition from healthy subject to patient being ratified by the giving and receiving of tablets. (Anyone who takes medicines is by definition a patient.)

What the "high-risk" strategy seeks to achieve is something like a truncation of the risk distribution. This general concept applies to all special preventive action in high-risk individuals - in at-risk pregnancies, in small babies, or in any other particularly susceptible group. It is a strategy with some clear and important advantages (Table 1).

Table 1. Prevention by the "high-risk" strategy: advantages

1. Intervention appropriate to individual
2. Subject motivation
3. Physician motivation
4. Cost-effective use of resources
5. Benefit: risk ratio favourable

Its first advantage is that it leads to intervention which is appropriate to the individual. A smoker who has a cough or who is found to have impaired ventilatory function has a special reason for stopping smoking. The doctor will see it as making sense to advise salt restriction in a hypertensive. In such instances the intervention makes sense because that individual already has a problem which that particular measure may possibly ameliorate. If we consider screening a population to discover those with high serum cholesterol levels and advising them on dietary change, then that intervention is appropriate to those people in particular; they have a diet-related metabolic problem.

The "high-risk" strategy produces interventions that are appropriate to the particular individuals advised to take them. Consequently it has the advantage of enhanced subject motivation. In our randomized controlled trial of smoking cessation in London civil servants we first screened some 20 000 men and from them selected about 1500 who were smokers with, in addition, markers of specially high risk for cardiorespiratory disease. They were recalled and a random half received anti-smoking counselling. The results, in terms of smoking cessation, were excellent because those men knew they had a special reason to stop. They had been picked out from others in their offices because, although everyone knows that smoking is a bad thing, they had a special reason why it was particularly unwise for them.

There is, of course, another and less reputable reason why screening enhances subject motivation, and that is the mystique of a scientific investigation. A ventilatory function test is a powerful enhancer of motivation to stop smoking: an instrument which the subject does not quite understand, that looks rather impressive, has produced evidence that he is a special person with a special problem. The electrocardiogram is an even more powerful motivator, if you are unscrupulous enough to use it in prevention. A man may feel entirely well, but if those little squiggles on the paper tell the doctor that he has got trouble, then he must accept that he has now become a patient. That is a powerful persuader. (I suspect it is also a powerful cause of lying awake in the night and thinking about it.)

For rather similar reasons the "high-risk" approach also motivates physicians. Doctors, quite rightly, are uncomfortable about intervening in a situation where their help was not asked for. Before imposing advice on somebody who was getting on all right without them, they like to feel that there is a proper and special justification in that particular case.

The "high-risk" approach offers a more cost-effective use of limited resources. One of the things we have learned in health education at the individual level is that once-only advice is a waste of time. To get results we may need a considerable investment of counselling time and follow-up. It is costly in use of time and effort and resources, and therefore it is more effective to concentrate limited medical services and time where the need - and therefore also the benefit - is likely to be greatest.

A final advantage of the "high-risk" approach is that it offers a more favourable ratio of benefits to risks. If intervention must carry some adverse effects or costs, and if the risk and cost are much the same for everybody, then the ratio of the costs to the benefits will be more favourable where the benefits are larger.

Unfortunately the "high-risk" strategy of prevention also has some serious disadvantages and limitations (Table 2).

The first centres around the difficulties and costs of screening. Supposing that we were to embark, as some had advocated, on a policy of screening for high cholesterol levels and giving dietary advice to those individuals at special risk. The disease process we are trying to prevent (atherosclerosis and its complications) begins early in life, so we should have to initiate screening perhaps at the age of ten. However, the abnormality we seek to detect is not a stable lifetime characteristic, so we must advocate repeated screening at suitable intervals.

Table 2. Prevention by the "high-risk" strategy: disadvantages

1. Difficulties and costs of screening
2. Palliative and temporary - not radical
3. Limited potential for
    (a) individual
    (b) population
4. Behaviourally inappropriate

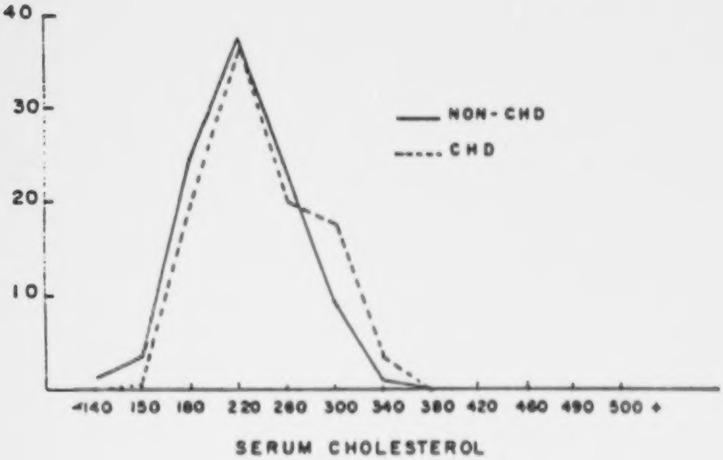
In all screening one meets problems with uptake, and the tendency for the response to be greater amongst those sections of the population who are often least at risk of the disease. Often there is an even greater problem: screening detects certain individuals who will receive special advice, but at the same time it cannot help also discovering much larger numbers of "borderliners", that is, people whose results mark them as at increased risk but for whom we do not have an appropriate treatment to reduce their risk.

The second disadvantage of the "high-risk" strategy is that it is palliative and temporary, not radical. It does not seek to alter the underlying causes of the disease but to identify individuals who are particularly susceptible to those causes. Presumably in every generation there will be such susceptibles; and if prevention and control efforts were confined to these high-risk individuals, then that approach would need to be sustained year after year and generation after generation. It does not deal with the root of the problem, but seeks to protect those who are vulnerable to it; and they will always be around.

The potential for this approach is limited - sometimes more than we could have expected - both for the individual and for the population. There are two reasons for this. The first is that our power to predict future disease is usually very weak. Most individuals with risk factors will remain well, at least for some years; contrarywise, unexpected illness may happen to someone who has just received an "all clear" report from a screening examination. One of the limitations of the relative risk statistic is that it gives no idea of the absolute level of danger. Thus the Framingham Study has impressed us all with its powerful discrimination between high- and low-risk groups, but when we see (Fig. 3) the degree of overlap in serum cholesterol level between future cases and those who remained healthy, it is not surprising that an individual's future is so often misassessed.

Often the best predictor of future major disease is the presence of existing minor disease. A low ventilatory function today is the best predictor of its future rate of decline. A high blood pressure today is the best predictor of its future rate of rise. Early coronary heart disease is better than all the conventional risk factors as a predictor of future fatal disease. However, even if screening includes such tests for early disease, our experience in the Heart Disease Prevention Project (Table 3) still points to a very weak ability to predict the future of any particular individual.

Fig. 3. Percentage distribution of serum cholesterol levels (mg/dl) in men aged 50-62 who did or did not subsequently develop coronary heart disease (Framingham Study)



Source: Kannel et al. (5).

This point came home to me only recently. I have long congratulated myself on my low levels of coronary risk factors, and I joked to my friends that if I were to die suddenly, I should be very surprised. I even speculated on what other disease - perhaps colon cancer - would be the commonest cause of death for a man in the lowest group of cardiovascular risk. The painful truth is that for such an individual in a western population the commonest cause of death - by far - is coronary heart disease! Everyone, in fact, is a high-risk individual for this uniquely mass disease.

Table 3. Five-year incidence of myocardial infarction in the UK Heart Disease Prevention Project

Entry characteristic	% of men	% of MI cases	MI incidence rate %
Risk factors alone	15	32	7
"Ischaemia"	16	41	11
"Ischaemia" + risk factors	2	12	22
All men	100	100	4

Source: Heller et al. (6).

There is another, related reason why the predictive basis of the "high-risk" strategy of prevention is weak. It is well illustrated by some data from Alberman (7) which relate the occurrence of Down's syndrome births to maternal age (Table 4). Mothers under 30 years are individually at minimal risk; but because they are so numerous, they generate half the cases. High-risk individuals aged 40 and above generate only 13% of the cases.

Table 4. Incidence of Down's syndrome according to maternal age

Maternal age (years)	Risk of Down's syndrome per 1000 births	Total births in age group (as % of) all ages)	% of total Down's syndrome occurring in age group
.30	0.7	78	51
30-34	1.3	16	20
35-39	3.7	5	16
40-44	13.1	0.95	11
.45	34.6	0.05	2
All ages	1.5	100	100

Source: Alberman & Berry (7).

The lesson from this example is that a large number of people at a small risk may give rise to more cases of disease than the small number who are at a high risk. This situation seems to be common, and it limits the utility of the "high-risk" approach to prevention.

A further disadvantage of the "high-risk" strategy is that it is behaviourally inappropriate. Eating, smoking, exercise and all our other lifestyle characteristics are constrained by social norms. If we try to eat differently from our friends it will not only be inconvenient, but we risk being regarded as cranks or hypochondriacs. If a man's work environment encourages heavy drinking, then advice that he is damaging his liver is unlikely to have any effect. No-one who has attempted any sort of health education effort in individuals needs to be told that it is difficult for such people to step out of line with their peers. This is what the "high-risk" preventive strategy reguires them to do.

The population strategy

This is the attempt to control the determinants of incidence, to lower the mean level of risk factors, to shift the whole distribution of exposure in a favourable direction. In its traditional "public health" form it has involved mass environmental control methods; in its modern form it is attempting (less successfully) to alter some of society's norms of behaviour.

The advantages are powerful (Table 5). The first is that it is radical. It attempts to remove the underlying causes that make the disease common. It has a large potential - often larger than one would have expected - for the population as a whole. From Framingham data one can compute that a 10 mmHg lowering of the blood pressure distribution as a whole would correspond to about a 30% reduction in the total attributable mortality.

Table 5. Prevention by the "population strategy": advantages

1. Radical
2. Large potential for population
3. Behaviourally appropriate

The approach is behaviourally appropriate. If non-smoking eventually becomes "normal", then it will be much less necessary to keep on persuading individuals. Once a social norm of behaviour has become accepted and (as in the case of diet) once the supply industries have adapted themselves to the new pattern, then the maintenance of that situation no longer requires effort from individuals. The health education phase aimed at changing individuals is, we hope, a temporary necessity, pending changes in the norms of what is socially acceptable.

Unfortunately the population strategy of prevention has also some weighty drawbacks (Table 6). It offers only a small benefit to each individual, since most of them were going to be all right anyway, at least for many years. This leads to the prevention paradox (8): "A preventive measure which brings much benefit to the population offers little to each participating individual". This has been the history of public health - of immunization, the wearing of seat belts and now the attempt to change various lifestyle characteristics. Of enormous potential importance to the population as a whole, these measures offer very little - particularly in the short term - to each individual; and thus there is poor motivation of the subject. We should not be surprised that health education tends to be relatively ineffective for individuals and in the short term. Mostly people act for substantial and immediate rewards, and the medical motivation for health education is inherently weak. Their health next year is not likely to be much better if they accept our advice or if they reject it. Much more powerful as motivators for health education are the social rewards of enhanced self-esteem and social approval.

Table 6. Prevention by the "population strategy": disadvantages

1. Small benefit to individual ("prevention paradox")
2. Poor motivation of subject
3. Poor motivation of physician
4. Benefit-risk ratio worrisome

There is also in the population approach only poor motivation of physicians. Many medical practitioners who embarked with enthusiasm on anti-smoking education have become disheartened because their success rate was no more than 5% or 10%: in clinical practice one's expectation of results is higher. Grateful patients are few in preventive medicine, where success is marked by a non-event. The skills of behavioural advice are different and unfamiliar, and professional esteem is lowered by a lack of skill. Harder to overcome than any of these, however, is the enormous difficulty for medical personnel to see health as a population issue and not merely as a problem for individuals.

In mass prevention each individual has usually only a small expectation of benefit, and this small benefit can easily be outweighed by a small risk (8). This happened in the World Health Organization clofibrate trial (9), where a cholesterol-lowering drug seems to have killed more than it saved, even though the fatal complication rate was only about 1 per 1000 per year. Such low-order risks, which can be vitally important to the balance sheet of mass preventive plans, may be hard or impossible to detect. This makes it important to distinguish two approaches. The first is the restoration of biological normality by the removal of an abnormal exposure (e.g. stopping smoking, controlling air pollution, moderating some of our recently-acquired dietary deviations); here there can be some presumption of safety. This is not true for the other kind of preventive approach, which leaves intact the underlying causes of incidence and seeks instead to interpose some new, supposedly protective intervention (e.g. immunization, drugs, jogging). Here the onus is on the activists to produce adequate evidence of safety.

Conclusions

Case-centred epidemiology identifies individual susceptibility, but it may fail to identify the underlying causes of incidence. The "high-risk" strategy of prevention is an interim expedient, needed in order to protect susceptible individuals, but only for so long as the underlying causes of incidence remain unknown or uncontrollable; if causes can be removed, susceptibility ceases to matter.

Realistically, many diseases will long continue to call for both approaches, and fortunately competition between them is usually unnecessary. Nevertheless, the priority of concern should always be the discovery and control of the causes of incidence.

REFERENCES

1. Pocock, S.J. et al. British Regional Heart Study: geographic variations in cardiovascular mortality and the role of water quality. British medical journal, 283: 1243-1249 (1980).
2. Shaper, A.G. Blood pressure studies in East Africa. In: Stamler, J. et al., ed. The Epidemiology of hypertension. New York, Grune and Straten, 1967, pp. 139-145.
3. Reid, D.D. et al. Cardiorespiratory disease and diabetes among middle-aged male civil servants. Lancet, 1: 469-473 (1974).
4. Keys, A. Coronary heart disease in seven countries. New York, American Heart Association, 1970 (American Heart Association Monograph No. 29).

5. Kannel, W.B. et al. Serum lipid precursors of coronary heart disease. Human pathology, 2: 129-151 (1971).
6. Heller, R.F. et al. How well can we predict coronary heart disease? Findings in the United Kingdom Heart Disease Prevention Project. British medical journal, 288: 1409-1411 (1984).
7. Alberman, E. & Berry, C. Prenatal diagnosis and the specialist in community medicine. Community medicine, 1: 89-96 (1979).
8. Rose G. Strategy of prevention: lessons from cardiovascular disease. British medical journal, 282: 1847-1851 (1981).
9. Committee of principal investigators. A co-operative trial in the primary prevention of ischaemic heart disease. British heart journal, 40: 1069-1118 (1978).

STRATEGIES FOR DISEASE PREVENTION AND HEALTH PROMOTION IN MATERNAL AND CHILD HEALTH: THE "ECOLOGICAL" VERSUS THE "HIGH-RISK" APPROACH[a]

by
Robert W. Chamberlin

In terms of cost, disability and frequency, the major problems for prevention in maternal and child health today are: adolescent and other unwanted pregnancies, low birth weight babies, birth defects, injuries, dental caries, developmental disabilities including emotional and learning problems, and the types of family dysfunction leading to child abuse and neglect (1-11). Curative or rehabilitative costs to treat these conditions after they occur are becoming increasingly expensive, especially when they involve hospitalization, foster care and special education. Studies investigating the causes of these conditions indicate that they are most likely to occur in families characterized by some combination of the following (1-30):

(a) the parents have little experience with and/or knowledge about childbirth and child care;

(b) they are receiving little in the way of emotional support from family and friends because of recent moves, separation and divorce or other isolating circumstances;

(c) they are under a good deal of stress because of economic, health or emotional problems.

Families with these characteristics are not limited to any one segment of our society and are increasing in all parts of the nation. Today, as compared to ten years ago, there are considerably more single-parent families, families in which the mother is young and inexperienced in child care, families that are isolated from relatives and friends because of a recent move to a new area or a recent divorce, and families that are having increasing difficulty in meeting their basic needs of food, clothing, shelter and medical care, because of no employment or underemployment and the inroads on the dollar caused by inflation (3,6,31).

Over the past decade the most widely used strategy for allocating dollars to prevent these types of problem and promote the health and development of the child has been based on the concept of "high risk". This approach, developed on the basis of retrospective data, assumes that we can identify a relatively small number of families that will produce the majority of child health and developmental problems in a community. Concentrating scarce resources on this group will, it is argued, produce "the biggest bang for the buck". The goal is usually to try and identify about 20% of all families from whom will come 80% of the children in a given community who will develop a specific kind of problem, such as being of low birth weight, or having a learning problem in school. Criteria developed from retrospective data have been set up to identify high-risk pregnancies, children at risk for developmental disorders, families at risk for child abuse and neglect and so forth. Special programmes of prevention are then set up for those at risk. Proponents of this approach can point to studies that show there is a higher than average incidence of specified problems coming from these high-risk groups, and intervention programmes have often been of benefit to those who received them. Why, with these kinds of positive results, are we questioning this model?

---

[a] This article was published in Journal of public health policy, June: 185-197 (1984).

The problems with this approach become apparent when one uses the community-wide incidence of a particular problem to test the sensitivity and specificity of the predictive method used. For example, if one develops a risk score that prospectively predicts even half of the total number of children in a community who will develop a specific problem, the size of the population at risk is well over the 20% goal and becomes unwieldy. In a study of the use of risk registers to aid in the early detection of children with handicapping conditions, it was found that it was necessary to follow 41% of the general population in order to include 65% of the children who later developed chronic handicaps (32). In a similar attempt, with a large cohort of births across England (N = 1600), Davie, Butler and Goldstein found they had to include 25% of the total population in their risk group in order to include 51% of the total number of children who were later identified as mentally retarded (33).

If one tries to reduce the number of false positives by increasing the specificity of risk criteria, the ability to predict abnormal outcome improves, but the number of children identified makes up only a small proportion of the total number of children in the community that develop similar problems. An example of this comes from the longitudinal study of the Children of Kauai (14). Children with high perinatal risk scores were followed up to age 18. When compared with non-risk children, this group produced a higher percentage of persons with school problems. However, perinatal risk children with school difficulty made up less than 15% of all the children in the community who developed such problems. Thus, any preventive programme aimed at this group would have had little impact on the community incidence as a whole.

Similar problems have been encountered in trying to predict which children will develop mental health problems and/or juvenile delinquency. For example, Kohlberg et al., in their review of the literature concerning the predictability of adult mental health from childhood behaviour, found that "our review of research will indicate we cannot reliably select out the small group of children with adjustment disturbances who will end up in jail and mental hospitals unless treated from the larger group of children with disturbances or from obviously bad environments who will not" (34). And from the Thousand Family Study in Newcastle upon Tyne: "Prediction of delinquency either by intuitive methods or by use of selective indices as presently available would appear to be of little or no practical value" (35). Our own review of the literature found that trying to predict any child characteristic very far into the future was not very accurate (36).

Even when one is trying to predict outcome over a relatively short period of time, such as the length of a pregnancy, the accuracy is not very great. For example, in a study by Hobel et al. of 758 pregnancies, risk criteria were identified for both pregnancy and the interpartum period (37). Cutoff points were established for each period to identify those at high risk. This produced four groups of mothers according to whether they were high-risk for both periods, for neither, or high in one and low in another. Outcomes, in terms of neonatal morbidity and perinatal mortality, were determined for each group. Table 1 shows these results.

Several things can be seen from this table. First, no matter what combination of risk factors is used, at least half the pregnancies will have a normal outcome. Even the best predictor of abnormal outcome (high risk at both periods), has a sensitivity of only 41%. We can increase this to 84% by combining all risk groups, but to do this we must include 53% of the total population in our high risk group.

Another defect of the high-risk approach is that, in the long run, developmental outcomes are more related to general family and population characteristics than to specific risk factors. For example, in an eight-year follow-up of children abused and/or neglected in infancy, comparisons of outcome were made with a random sample of children from the same community (38). There was no significant difference. Both groups had a high prevalence of speech disorders, signs of emotional disturbance, and poor achievement in school. Many of the families of the comparison group had problems similar to the abusive families, including disorganization, drug and alcohol abuse, and family violence.

In the Children of Kauai Study, the amount of intellectual stimulation and emotional support found in the home when the child was age two was a better predictor of school functioning at age ten than the perinatal risk score (14). In a large national longitudinal study in England, Alberman investigated what factors might aid in the early prediction of learning disorders (39). She found that differences in social class and birth order were more predictive of reading disability than birth weight. Finally, after an extensive review of long-term follow-up studies of children with such perinatal risk factors as being of low weight and/or having a prolonged period of anoxia at birth, Sameroff and Chandler conclude (40):

> Retrospective studies have often given the impression of having established clear relationships between pregnancy and delivery complications and later deviance. Prospective studies of the same variables have, however, not succeeded in demonstrating the predictive efficiency of these supposed risk factors. Most infants who suffer perinatal problems have proven to have normal developmental outcomes ... The large role given to socioeconomic and familial factors in producing emotional difficulties and intellectual retardation tends to overshadow the effects of early perinatal difficulties. The environment appears to have the potential of minimizing or maximizing such early developmental difficulties. High socioeconomic status dissipates the effects of such perinatal complications as anoxia or low birth weight. Poor social environmental conditions tend to amplify the effects of such early complications. Since the caretaking environment plays such a major role in determining developmental outcomes, a "continuum of caretaking causality" was hypothesized to describe the range of deviant outcomes which would be attributed to poor parenting.

In summary, the problem with the high-risk approach is that our ability to predict individual outcomes over any length of time is quite limited. Because of this, one ends up with either a large "at risk" population, most of whom will not develop the outcome in question, or a small selected group, with a higher incidence of problems, but the children from this group will make up only a small percentage of the total number of children in the community who develop similar problems. Finally, the longer one follows a given group of children, the more likely they are to develop characteristics similar to the general social/cultural milieu in which they are being reared.

Table 1. Accuracy in predicting pregnancy outcomes using various risk factors

Risk status							
Pregnancy	Inter-partum	N	% of total	Perinatal mortality	Neonatal morbidity	% Abnormal outcomes included	% Normal pregnancy outcome
Low	Low	360	47	1	22	16	94
High	Low	135	18	3	16	14	86
Low	High	144	19	5	35	28	72
High	High	119	16	16	42	41	51
TOTALS		758	100	25	115	100	
Combined risk							
High pregnancy		254	33	19	58	55	70
High interpartum		263	35	21	77	70	63
High either or both		398	52	24	93	84	71

Source: Hobel, C., et al. (37).

The difficulties encountered in trying to predict who will develop what has led an increasing number of people to search for more effective preventive strategies. After a review of the use of risk registers in England, Rogers states: "The search for sufficiently 'selective' criteria among current 'at risk' factors promises to be fruitless and, therefore, a misdirection of scarce resources" (32). He advocates instead a periodic screening of all children along with a closer scrutiny of the five to ten per cent of infants with risk factors that are known to produce defects in a high percentage of the children exposed to them, such as rubella during early pregnancy and being of very low birth weight.

Another approach that appears promising is based on an "ecological model". The perspective here is that child health and developmental outcomes are related to parent functioning which is influenced by both formal (health and human service providers) and informal (family and friends) community support systems. These are, in turn influenced by both cultural values and the policies of local, state, and national governments (24, 29). With this approach, the focus is on the community as a whole and the relationships between families and their current environments (24, 29). Intervention strategies based on this model attempt to reduce problems and promote maternal and child health and development by improving the community resources that can strengthen the functioning of all families and children. For example, in response to their finding of the difficulty of predicting which children will develop serious mental illness, Kohlberg et al. state: "In the absence of such predictability, it seems impossible to socially justify the use of public funds to intensively treat a small proportion of the child population. The obvious practical alternative is to focus more heavily on ecological community mental health and psycho-educational approaches".

Silver also advocates changes in our health care delivery system that appear based on an ecological model (4). After an extensive comparison of our own health care systems with those of countries having lower infant mortality and handicapped child rates, he identifies the two main problems with our system as an attempt to target preventive programmes only to special groups, such as minorities and the poor, instead of making them available to all families with children, and attempting to have preventive programmes carried out by physicians who are expensive and are often not well trained and/or highly motivated to do this. He calls for a comprehensive national programme for all children that would include basic family support programmes, prepaid medical services, locally run child health centres staffed by midwives and nurses, and a national child advocacy group. He recommends trying such a programme out at the state level first and financing preventive services separately from curative services with contributions from families and local governments, as well as state and federal funds.

To be successful at the local community level, such a programme would, in my opinion, include at least the following five components, in addition to primary health care services:

1. A community council made up of representatives of consumers, health care and human services providers, community leaders and government officials. The purpose of this group is to establish priorities and coordinate services.

2. A community-wide health education programme designed to:

    (a) educate the community in general and community leaders in particular about the need for preventive/promotive services and their long-term cost effectiveness;

    (b) educate actual or expectant parents about what they can do to improve their chances for a positive pregnancy outcome and to enhance the social, cognitive, and physical development of their child;

    (c) educate school-aged children about what they can do to enhance their own health and development and that of their children to be.

3. The availability of basic parent support services, which would include:

(a) parent-child centres: a place where parents can get information about child bearing and child rearing; learn birthing, parenting and home-making skills, receive temporary relief from child care activities, identify community resources to help solve family problems, and obtain quality day-care services for their child during working hours;

(b) birthing rooms or centres: to provide an emotionally supportive atmosphere for the mother and other family members during labour and delivery and provide the opportunity for early and sustained parent-newborn contact to facilitate bonding (when this is feasible and deemed desirable by the participating parties);

(c) home visitors: to assist families trying to cope with conditions of high stress and low support which interfere with their ability to make effective use of office or centre-based programmes;

(d) homemaker services: to provide emergency care when the mother becomes incapacitated during a crisis situation and home aides to help families over a long period of time when one or both parents are partially or totally unable to care for their children because of emotional or physical illness;

(e) transportation: to help families living in isolated areas to reach the available support services or to be available when a crisis occurs and usual sources of transportation are unavailable.

4. A consumer advocacy organization: the purpose of this group is to monitor how well existing programmes are meeting family needs and to work with local government officials and others to ensure the sustained long-term funding of services.

5. A reliable assessment system: to identify families in need of services and to monitor programme effects over time.

Just where the main emphasis would lie will depend on the problems and resources of each community. For example, in some communities, the main intervention might be to establish a data collecting system in order to ascertain just what the needs are. In another, it might be to convince the community leaders to budget more funds for parent support services. In a third, it might be to try to improve coordination of existing services.

Perhaps the best examples of an existing community-wide approach to health promotion and disease prevention for maternal and child health that fits this model are in the Scandinavian countries. In Finland, each local authority is required by law to have a maternal and child centre which is available to all the residents of a defined geographic area (41). Home visitors are available to reach those families who have special problems or who do not make use of the centre-based programmes. Homemakers and home health aides are available to work with families during crisis situations or when the mother has a chronic handicapping condition. Financial incentives are used to encourage early entry into prenatal care. For those mothers living in isolated rural areas, transportation is provided to the clinics and to the hospital when labour commences. The bulk of these services are provided by persons other than physicians. With this system, more than 99% of all women receive prenatal care and 91% have their first visit before the end of the fourth month, 99.8% have their baby delivered in a hospital, 99% of the mothers have a postpartum examination within eight weeks, and 90% of the children are seen in the home before one month of age. Denmark and Sweden also provide a community-wide approach to prevention, though the organizational structures are somewhat different (42, 4). Although one cannot establish causal relationships, the infant mortality rates for these countries are among the lowest in the world, and hospitalization rates for diarrhoea and pneumonia in children under one year are much less than in most other developed countries (43).

Ecological approaches are also being tried in developing countries. For example, nutrition programmes based on high-risk models provide food only to those infants showing signs of malnutrition. The results of these programmes are usually short term only. Recently this approach has been replaced by an ecological strategy in which all mothers in a village are taught to weigh their children monthly and to give extra food to those whose weight gain pattern is falling off. In addition, mothers whose children are showing good rates of growth are teamed up with mothers whose children are falling off the growth curve to provide education and support. Although no formal evaluation data are yet available, long-term results appear to be better (44, 45).

Perhaps the best example of a community-wide approach to prevention in the United States is environmental sanitation. One can speculate how effective this programme would be if water purification and waste disposal systems had been limited to high-risk groups.

More recently, programmes to promote healthy lifestyles in general, and to reduce the mortality and morbidity of cardiovascular disease in particular, are being tried on a county or state-wide basis (46-48). These have usually involved developing a coordinating council and a county or state-wide programme in health education that involves the mass media, the schools and the workplace. So far, these programmes have not tried to improve the basic support services for families. An example of a county-wide programme that has tried this was recently reported from North Carolina (49). Here an effort was made to utilize and strengthen the existing support role of the church by training members of the congregations to serve as health educators and resource-utilization counsellors to other persons in the congregation.

Efforts to evaluate the effectiveness of these approaches is still ongoing. For maternal and child health the best we have been able to do is to develop comprehensive neighbourhood projects that involve only a small geographic segment of a community, or a community-wide programme that involves only a small segment of the population (those identified as "high risk") (50).

One of the arguments used against an ecological strategy is that it will cost too much. In terms of funding the five basic components, forming a coordinating council and an advocacy group can be done at little or no extra governmental expense. Also, most communities have a wealth of data sources that could be used for needs assessment and programme monitoring at little extra cost. Examples are head start and school entrance appraisals, vital statistics, special education reports, Medicaid records, and reports of child abuse and neglect. What is needed is a way to coordinate data collecting in a uniform manner. This leaves only the health education and parent support programmes in need of additional funds. Even here the money appears to be available in the community, but it is currently being used to fund a large number of categorical programmes from many different agencies. For example, nutrition programmes are run out of agricultural extension agencies, immunization programmes out of health departments, child abuse and neglect programmes out of social service departments, and adolescent pregnancy programmes out of any or all three. This fragmentation makes it impossible to approach families in an ecologically valid way. If each agency donated some portion of its budget to fund basic parent support services, such as parent drop-in centres and home visitor programmes for the community as a whole, much more could be accomplished at about the same cost. The recent combining of many categorical programmes into block grants at the state level could have facilitated this if it had not been combined with severe budget cuts. An example of how state agencies can get together and coordinate services is provided by a recent description of a handicapped child programme in Texas (51). Here the state legislature mandated that the four state agencies involved with providing services to handicapped children coordinate their activities and develop a comprehensive programme for early recognition and treatment. This has led to a marked improvement in the quantity and quality of services offered.

The problem, then, is not in the overall costs, but in how to reorganize our delivery system. We have made much progress in the last decade in identifying specific objectives for improving maternal and child health (52). We also have some fairly good ideas about what services are necessary to achieve them. What is needed now is a closer look at how to organize these services into a community-wide delivery system that takes into account all we have learned about human development.

Note: This article was written by Dr Chamberlin in his private capacity. No official support or endorsement by the Indian Health Service is intended or should be inferred.

REFERENCES

1. Haggerty, R.J. et al. Child health and the community. New York, John Wiley & Sons, 1975.
2. Harvard Child Health Project Task Force. Toward a primary medical care system responsive to children's needs. Cambridge, MA, Ballinger Publishing Company, 1977.
3. US Department of Health, Education and Welfare. Health: United States, 1978, 1978 (DHEW Publications No. (PHS) 78-1232).
4. Silver, G. Child health: America's future. Germantown, MD, Aspen Systems Corporation, 1978.
5. Brent, R.L. & Harris, M. ed. Prevention of embryonic, fetal and prenatal disease. Fogarty International Center of Advanced Study in the Health Sciences, 1976.
6. Allan Guttmacher Institute. Eleven million teenagers: what can be done about the epidemic of adolescent pregnancies in the United States. Planned Parenthood Federation of America, Inc., 1976.
7. Birch, H. & Gussow J. Disadvantaged children: health, nutrition and school failure. New York, Harcourt-Brace, 1970.

8. Richmond, J. & Weinberger, H.C. Programme implications of knowledge regarding the physical, intellectual, and emotional growth and development and the unmet needs of children and youths, *American journal of public health* (Supp.), 60: 23-67 (1970).
9. Miller, C.A. Health care of children and youth in America. *American journal of public health*, 65: 353-358 (1975).
10. Kane, R. et al., ed. *The health gap: medical services to the poor*. New York, Springer, 1976.
11. Newberger, E. et al. Child health in America: toward a rational public policy. *Milbank Memorial Fund quarterly: health and society*, 54: 249 (1976).
12. Miller, H. et al. Socioeconomic facts in relation to fetal growth in white infants. *Journal of pediatrics*, 89: 638-643 (1976).
13. *Preventive medicine: social determinants of human health - preventive medicine, USA*. New York, Prodist, 1976.
14. Werner, E. et al. *The children of Kauai: a longitudinal study from the prenatal period to age ten*. Honolulu, University of Hawaii Press, 1971.
15. Kempe, H. Approaches to preventing child abuse: the health visitor concept. *American journal of disabled children*, 130: 941-947 (1976).
16. Richardson, S. & Guttmacher, A.F. *Childbearing: its social and psychological aspects*. Baltimore, William & Wilkins, 1967.
17. Meyer, R. et al. Accidental injury to the preschool child. *Journal of Pediatrics*, 63: 95 (1963).
18. Giovanni, J. & Billingsley, A. Child neglect among the poor: a study of parental adequacy in families of three ethnic groups. *Child welfare*, 49: 196 (1970).
19. Morse, A. et al. Environmental correlates of pediatric social illness: preventive implications of an advocacy approach. *American journal of public health*, 67: 612-615 (1977).
20. Cobb, S. Social support as a moderator of life stress. *Psychosomatic medicine*, 38: 300-314 (1976).
21. Daniel, J. & Hyde, J. Working with high risk families; family advocacy and parent education programme. *Children today*, (November-December): 23-25 (1975).
22. Roghmann, K. & Haggerty R. Family stress and the use of health services. *International journal of epidemiology*, 1: 279-286 (1972).
23. Furstenberg, F. & Crawford A. Family support: helping teenage mothers to cope. *Family planning perspective*, 10: 322-333 (1978).
24. Bronfenbrenner, U. *The ecology of human development: experiments by nature and design*. Cambridge, MA, Harvard University Press, 1979.
25. Spence, J. et al. *A thousand families in Newcastle upon Tyne*. London, Oxford University Press, 1954.
26. Miller, F. et al. *Growing up in Newcastle upon Tyne*. London, Oxford University Press, 1960.
27. Yankauer, A. et al. An evaluation of prenatal care and its relationships to social class and social disorganization. *American journal of public health*, 43: 1001-1010 (1953).
28. Bronfenbrenner, U. Is early intervention effective? Facts and principles of early intervention. *In*: Clarke, A. & Clark, A. *Early experience: myth and evidence*. London, Open Books, 1976.
29. Brim O. Macro-structural influences on child development and the need for childhood social indicators. *American journal of orthopsychiatry*, 45: 516-524 (1975).
30. Gabarino, S. et al. *Protecting children from abuse and neglect*. San Francisco, Jossey-Bass, 1980.

31. *America's children, 1976*. Washington, National Council of Organizations for Children and Youth, 1976.
32. Rogers, M. Risk registers and the early detection of handicaps. *Developmental medicine and child neurology*, *10*: 651-661 (1968).
33. Davie R. et al. *From birth to seven*. London, Longman, 1972.
34. Kohlberg, L. et al. The predictability of adult mental health from childhood behavior. *In*: Wolman, B. ed. *Manual of child psychopathology*. New York, McGraw Hill, 1972.
35. Miller, F. et al. *The school years in Newcastle upon Tyne, 1952-1962*. London, Oxford University Press, 1974.
36. Chamberlin, R.W. The relationship of preschool behavior and learning patterns to later school functioning. *In*: Camp, B. ed. *Advances in behavioral pediatrics*. Greenwich, CT, JAI Press, 1982, Vol. 2.
37. Hobel, C. J. et al. Prenatal and intrapartum high-risk screening. *American journal of obstetrics and gynecology*, *117*: 1-9 (1973).
38. Elmer, E. A follow-up study of traumatized children. *Pediatrics*, *59*: 273-279 (1977).
39. Alberman, E. The prediction of learning disorders. *Developmental medicine and child neurology*, *15*: 202 (1973).
40. Sameroff, A. & Chandler, M. Reproductive risk and the continuum of caretaker casualty. *In*: *Review of child development research*, Chicago, University of Chicago Press, 1975, Vol. 4, pp. 187-244.
41. Wynn, M. & Wynn. A. *The protection of maternity and infancy: a study of services for pregnant women and young children in Finland*. London, Council for Children's Welfare, 1974.
42. Wagner, M. & Wagner, M. *The Danish national child care system*. Boulder, CO, West View Press, 1976.
43. Wynn, M. & Wynn. A. Some developments in child health care in Europe. *Hospital medicine*, *15*: 65-70 (1979).
44. Rohde, J. Mothers as weight watchers: the road to child health in the villages. *Journal of tropical pediatrics and environmental child health*, *21*: 295-297 (1975).
45. Rohde, J. Community based nutrition programs. Port-au-Prince, Haiti, Management Sciences for Health, 1981 (unpublished paper).
46. Flora, J. et al. Community organization in the Stanford Health Disease Prevention Program. Paper presented in the symposium: Health Promotion and Community Interventions, Annual APHA meeting, Montreal, Canada, 16 November, 1982.
47. Schecter, C. et al. Evaluating and monitoring community interventions in the comprehensive health improvement program (Pawtucket, Rhode Island and Lycoming County, Pennsylvania). Paper presented in the symposium: Health Promotion and Community Interventions, Annual APHA meeting, Montreal, Canada, 16 November, 1982.
48. Statewide implementation plan for high blood pressure control, 1979-1982. Prepared by Maryland High Blood Pressure Coordinating Council supported by the Maryland Department of Health and Mental Hygiene.
49. Hatch, J.H. and Eure, M. The community health education and resource utilization program. Paper presented at the 109th annual meeting of the American Public Health Association, Los Angeles, CA, 3 November, 1981.
50. Chamberlin, R.W. Conference exploring the use of home visitors to improve the delivery of preventive services to mothers with young children. New York, Department of Pediatrics, University of Rochester, 1981.
51. Iscoe, L. ECI: an interagency effort in intervention. *Human development news*, May 1983, pp. 1-2.
52. Department of Health and Human Services. *Promoting health/preventing disease: objectives for the nation*. Washington, DC, US Government Printing Office, 1980.

MORTALITY DECLINE AND WIDENING SOCIAL INEQUALITIES[*]

by
M.G. Marmot and M.E. McDowell

Summary

Mortality from coronary heart disease (CHD) is higher in manual than in nonmanual occupational classes and is higher in Scotland, Wales, and the north of England than in the south. Trends in these inequalities were examined in the light of the decline in CHD mortality in Great Britain. With the use of 1979-1983 death rates as standard, mortality ratios for all causes, lung cancer, CHD, and cerebrovascular disease in 1979-1983 were compared with standard mortality ratios (SMRs) in 1970-1972. Despite the general fall in mortality the relative disadvantage of manual compared with nonmanual classes has increased for each of these four cause groups. The regional differences in CHD mortality persist. Among men, in every region of Great Britain, CHD mortality has declined in nonmanual classes. Only in Wales has there been an appreciable decline on CHD mortality in manual classes. Among women, lung cancer and CHD mortality have fallen in nonmanual classes but have increased in manual classes. Differences in smoking between social classes are likely to be important. Other differences in behaviour may be important, but the effect of unemployment and increased income differentials should also be explored.

Introduction

Mortality from CHD and all causes in Great Britain has fallen (1,2), but striking social and regional differences persist (3-5). From an analysis of successive Registrar General's reports up to 1970-1972, we concluded that mortality from heart disease and hypertension had changed in the 1950s from being higher in nonmanual occupations to being higher in manual occupations (3). It seemed likely that a decline in mortality from heart disease would be experienced first in the higher classes. In the present study we compared mortality in 1970-1972 with that in 1979-1983 and examined trends in mortality from CHD and other causes among manual and nonmanual occupations, nationally and in regions of Great Britain.

Methods

Mortality by social class in England and Wales and Scotland can be analysed with the use of the Decennial Supplements on Occupational Mortality (6,7). These studies compare social class (derived from occupation) at death registration, for deaths in a few years around each census, with the social class of the population enumerated at census. Occupation descriptions at death and at census can vary, giving biased estimates of mortality rates by class (7,8), but such biases are not thought to be important with careful use of the data.

---

[*] This article was published in the Lancet, 2 August 1986: 274-276

The latest Decennial Supplement (1979-1983) (9) compares deaths in 1979, 1980, 1982 and 1983 with the census population in 1981 (mortality data by occupation are not available for 1981). It reports a considerable increase in this numerator/denominator bias and states that social class mortality rates are unreliable for comparison with earlier estimates of social class mortality. Information recorded at the 1981 census led to a more specific classification of occupations, but death registration did not show an equivalent improvement. Since the more precisely defined occupations are generally classified in a different social class from the residual groups, considerable bias was introduced to the social class mortality rates (9).

To overcome these difficulties we have divided the original six Registrar General's social classes into two major groups: nonmanual workers (original classes I, II and IIIN) and manual workers (IIIM, IV and V). Census and death registration may vary in the descriptions recorded for the same occupation; this frequently leads to classification in different social classes. However, there is no evidence that this could lead to any serious misclassification between manual and nonmanual occupations. SMRs have therefore been calculated for men and women for the nonmanual and manual groups from the data published in the 1979-1983 Decennial Supplement (9). Husband's social class has been used for married women because the data do not give usable estimates of women's social class or occupational mortality rates (10). There is, however, evidence that social class as determined by a woman's occupation is not a good indicator of differentials in mortality risks (10).

The 1979-1983 Decennial Supplement data allow the calculation of SMRs for men aged 20-64 and for women aged 20-59 in Great Britain. The age range for men is similar to the 1970-1972 supplement, but for women is not. SMRs were calculated for women aged 20-54 to permit comparison with the earlier data, and for men aged 20-54, 55-64 and 20-64, i.e. the age standardization was done within age groups.

Comparable data have been extracted for men from the 1971 based Supplements for England and Wales (7) and Scotland (11). The Scottish study (11) was based on data for five years (1969-1973), compared with three years for England and Wales (1970-1972), but for ease of reference the earlier data are henceforth collectively referred to as Great Britain 1970-1972 data. SMRs were calculated for Great Britain with the use of expected deaths derived from the 1979-1983 study death rates. This allows direct comparisons of SMRs across occupational groups and across time periods. The disease groups examined were all causes, cancer of trachea and bronchus (International Classification of Diseases (ICD) 162), CHD (410-414), cerebrovascular disease (430-438), and all other causes. These were coded according to the 8th revision of the ICD in the 1970-1972 period, and the 9th revision in the 1979-1983 period.

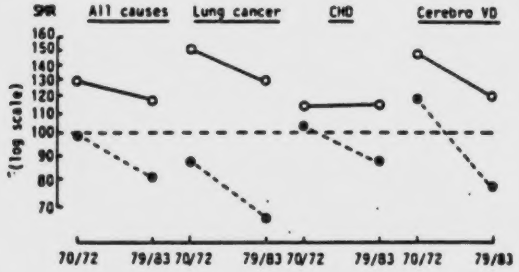
Results

Fig. 1 shows SMRs, all standardized to the 1979-1983 data. Relative to 1970-1972, all-cause mortality for 1979-1983 has fallen in nonmanual and manual groups in both men and women, but the social gradient has widened:

mortality has declined more rapidly among nonmanual than among manual groups. Mortality rates from cerebrovascular disease and lung cancer in men show a similar picture. Deaths from lung cancer in women and CHD in men and women have fallen in nonmanual groups, but in those classified as manual, mortality has risen over the decade. For all other causes (grouped together) SMRs for nonmanual groups fell from 92 to 78 (15.2% decline) over the decade and, for manual, from 135 to 114 (15.5%).

Fig. 1. SMRs for select causes of death in Great Britain 1970-1972 and 1979-1983 for manual (0-0) and non-manual (0-0) groups[a]

(a) Men aged 20-64



(b) Married women aged 20-54 classified by husband's occupation

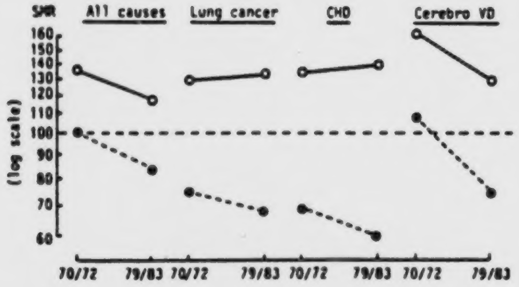


Table 1 shows the SMRs for each of the age groups for men. The relative advantage of the nonmanual groups is expressed as a ratio of SMRs nonmanual:manual. These show nonmanual workers to be favoured more at younger than at older ages, and for each cause group and age group their relative advantage has increased over time.

---

[a] For each cause the SMR in 1979-1983 is 100 for each sex.

Table 1. SMRs for select causes of death in Great Britain 1970-1972 and 1979-1983 among men aged 20-54 and 55-64[a]

		1970-1972			1979-1983		
Cause of death	Age	Non-manual	Manual	NM/M	Non-manual	Manual	NM/M
All causes	20-54	98	131	0.75	76	115	0.66
	55-64	99	128	0.77	82	117	0.70
	20-64	99	129	0.77	80	116	0.69
Lung cancer	20-54	93	167	0.56	60	133	0.45
	55-64	85	145	0.59	67	128	0.52
	20-64	87	150	0.58	65	129	0.50
Coronary heart disease	20-54	103	120	0.86	80	113	0.71
	55-64	102	110	0.93	90	117	0.77
	20-64	102	113	0.90	87	114	0.76
Cerebrovascular disease	20-54	107	141	0.76	73	121	0.60
	55-64	123	151	0.81	77	119	0.65
	20-64	118	148	0.80	76	120	0.63

[a] For each cause, and within each age group, the SMR for all men in 1979-1983 is 100. The 1970-1972 figures were standardized with the 1979-1983 rates.

Table 2 shows a decline in CHD mortality in nonmanual workers in every part of Great Britain, if only marginally in Scotland. By contrast, SMRs in manual workers have stayed roughly constant in every region but Wales, where the SMR has dropped from 140 to 125. Regional differences in mortality have changed little over the decade.

A decline in cigarette smoking may have an important role in the greater fall in mortality in nonmanual groups, the proportionate decline in smoking has been greater in nonmanual than in manual workers (Table 3).

Discussion

There has been an overall fall in all-cause mortality for both manual and nonmanual occupational classes, but the rate of decline has been greater in nonmanual groups. Thus the social gap has widened. Widening inequalities between social groups are evident in mortality from lung cancer, CHD, and cerebrovascular disease, each of which already differed markedly by social class in 1970-1972. For CHD the regional differences within manual and nonmanual groups are undiminished. Potentially, these changes might result from changes in disease classification or social class composition, or from environment/lifestyle factors affecting the classes differentially.

Table 2. SMRs for CHD 1970-1972 and 1979-1983 for manual and nonmanual occupations by region in England, Wales and Scotland, men aged 20-64[a]

Region	Nonmanual		Manual	
	1970-72	1979-83	1970-72	1979-83
North West	121	104	129	131
Wales	117	93	140	125
Yorkshire and Humberside	114	97	120	120
North	111	100	132	129
West Midlands	100	86	108	112
East Midlands	96	87	101	106
South West	93	79	103	100
South East	90	76	95	98
East Anglia	86	69	82	81
Central Clydeside conurbation	..	110)	..	163)
Strathclyde (excluding Clydeside)	103	105) 100	137	166) 144
Rest of Scotland	..	94)	..	125)

[a] SMR for all men in Great Britain in 1979-1983 is 100. The 1970-1972 figures were standardized with the 1979-1983 rates.

Table 3. Prevalence of cigarette smoking in Great Britain among men and women aged 16 and over

	1972		1982	
	Nonmanual %	Manual %	Nonmanual %	Manual %
Men	43	58	28	44
Women	38	45	29	38

Changes in classification could certainly not account for the steeper decline in all-cause mortality of the nonmanual groups. Nor are they a likely explanation of cause-specific trends. In our previous analysis, we traced social class patterns of cardiovascular mortality from the 1930s to the 1970s (3). For this, large assumptions were made about how fashions in classification may have changed, and all non-rheumatic heart disease and hypertension were grouped together. We minimized these difficulties here by concentrating on the past decade. The change from the 8th to the 9th revision of the ICD between 1970-1972 and 1979-1983 has not led to major changes in disease classification (12). It could account for a 4.4% drop in CHD deaths (12), but it is hard to think of a way by which this small change due to classification could be applied selectively to deaths among nonmanual workers of both sexes, but not manual, and in every region of Great Britain except Wales.

A second possibility is that changes in social class composition could account for the worse relative position of those in manual groups. In 1971, of men aged 20-64 in Great Britain 60% were in manual occupations. By 1981 this proportion had fallen to 55%, with a 4% increase in nonmanual workers and a 1% increase in those unclassified. The 5% of manual workers who transferred to nonmanual groups may have formed a healthier subgroup but this could not account for the increased mortality differential. CHD mortality in men in nonmanual occupations fell by 15% whereas in manual occupations it increased by 1%, and even if the 5% who moved to nonmanual groups remained alive, transfer of their figures back to the manual group would not change a 1% rise to an average fall of 15%; at most there could only be a fall of 4%. Similarly, a differential recruitment of immigrants into manual groups could not account for the divergent social trends because the numbers and mortality differentials among immigrants are not large enough (13).

Nor could the widened social gap be due to misclassification of the unemployed. The unemployed are classified by their last occupation at census and at death and are included here. Only if the unemployed were assigned to a lower social group at death than at census could there be a spurious widening of the mortality gap. The reverse is more usual (7), and this bias would be likely to reduce social differences.

Unemployment, however, may be among the environmental/lifestyle factors that are important. It is possible that worsening unemployment, selectively affecting manual occupations, causes a true rise in mortality of manual occupations relative to nonmanual occupations. In 1983, 23% of men in manual occupations had had at least one spell of unemployment in the previous 12 months, compared with 8% of men in nonmanual occupations (14). If, after adjusting for age and social class, the unemployed have a 20% higher mortality than the employed (15), this would contribute to but not explain entirely the worse relative position of manual workers.

In addition, income differentials between manual and nonmanual groups may have widened; the nonmanual:manual gap in real disposable income of married men with children narrowed slightly between 1970 and 1975 but widened again up to 1983 (14,16). In 1970, real weekly disposable income (at 1975 prices) was 12 higher in the upper quartile of nonmanual workers than in the upper quartile of mannual workers. This rose to 15 in 1983. For the lower quartile of earnings the nonmanual/manual gap rose from 3 to 6 over the same period. Between 1979 and 1983 the real disposable income of the upper and lower quartiles of manual workers actually declined, whereas nonmanual earnings rose, most notably in the upper quartile. To the extent that income *per se* accounts for part of the inverse association between social class and mortality (17), a widening gap in income between classes might play some part in the widening gap in mortality rates.

Other aspects of lifestyle related to, or independent of, the economic picture should be explored. Smoking differentials by class have, if anything, widened. The latent period is too short for this to have contributed much to the widening social differentials in lung cancer. They may have a role in widening differentials in other diseases. Diet, alcohol and environmental/occupational exposures, including psychosocial ones, should be considered.

REFERENCES

1. Marmot, M.G. Interpretation of trends in coronary heart disease mortality. Acta Medica Scandinavica (suppl), 701: 58-65 (1985).
2. Heller, R.F. et al. Decline in rate of death from ischaemic heart disease in the United Kingdom. British medical journal, 286: 260-262 (1983).
3. Marmot, M.G. et al. The changing social class distribution of heart disease. British medical journal, ii: 1109-1112 (1978).
4. Inequalities in health. London, Department of Health and Social Security, 1980.
5. Pocock, S.J. et al. British regional heart study: geographic variations in cardiovascular mortality, and the role of water quality. British medical journal, 280: 1243-1249 (1980).
6. Leete, R. & Fox, A.J. Registrar General's social class origins and uses. Population trends, 8: 1-7 (1977).
7. Office of Population Censuses and Surveys. Registrar General's decennial supplement on occupational mortality 1970-72. London, H.M. Stationery Office, 1978.
8. Alderson, M.R. Some sources of error in British occupational mortality data. British journal of industrial medicine, 29: 245-254 (1982).
9. Office of Population Censuses and Surveys. Registrar General's decennial supplement on occupational mortality 1979-83. London, H.M. Stationery Office, 1986.
10. McDowall, M.E. Measuring women's occupational mortality. Population trends, 34: 25 (1983).
11. Registrar General - Scotland. Occupational mortality 1969-73. Scotland, GRO, 1981.
12. Office of Population Censuses and Surveys. Mortality statistics. Comparison of 8th and 9th revisions of the International Classification of Diseases. DHI No. 10. London, H.M. Stationery Office, 1983.
13. Marmot, M.G. et al. Mortality of immigrants in England and Wales. OPCS Studies of medical and population subjects No. 47. London, H.M. Stationery Office, 1984.
14. Central Statistical Office. Social trends 15. London, H.M. Stationery Office, 1985.
15. Moser, K.A. et al. Unemployment and mortality in the OPCS longitudinal study. Lancet, ii: 1324-1349 (1984).
16. Central Statistical Office. Social trends 11. London, H.M. Stationery Office, 1981.
17. Wilkinson, R.G. Income and mortality. In: Wilkinson, R.G. ed. Class and health; research and longitudinal data. London, Tavistock, 1986.

RELATIONSHIP OF PHYSICAL HEALTH STATUS AND HEALTH PRACTICES[a]

by
Nedra B. Belloc and Lester Breslow

This paper analyses physical health status in an adult population and its relationship to various independent variables. Data for the study were gathered by questionnaires completed by a probability-based sample of adult residents of Alameda County, CA, in 1965.

Physical health is measured along a spectrum ranging from severe disability to high energy level with absence of chronic conditions or symptoms. The "ridit" (Relative to an Identified Distribution) which places each individual along the spectrum can be averaged for comparison of groups, and can be adjusted for differences due to age and sex.

This paper examines the relation between common health practices, including hours of sleep, regularity of meals, physical activity, smoking and drinking, and physical health status. Good practices are shown to be associated with positive health, and the relationship of these activities was cumulative, those who followed all of the good practices being in better health, even though older, than those who failed to do so. This association was found to be independent of age, sex, and economic status.

Ascertaining the factors that lead to health in a population requires first of all an acceptable index of health. The obvious limitations of most health indices, for example, infant mortality or the occurrence of certain diseases, has led to the search for some means of measuring health in a more generic sense. With the degree of control now being achieved over infant deaths and so many specific diseases, and with the health of an aging population so clearly related to multiple diseases, a general indicator of health status becomes ever more important. It is needed as the basis for comparing the health of populations and for determining what favours health and what does not. Among other purposes a general health index would be useful in estimating the effects of general styles of life, specific health habits and personal health care on health.

As one approach to this matter, studies in the Human Population Laboratory of Alameda County, CA, have been aimed at quantifying the World Health Organization concept of health, i.e. a state of "physical, mental and social well-being". Measurement of physical health and of mental health in a general population have been reported (1,2) and a measure of social health is being prepared.

---

[a] This article was published in Preventive medicine, 1: 409-421 (1972).

One of the above reports (1) showed a strong negative relationship between physical health and age, and a positive relationship between physical health and economic status, as might be expected. In this paper we present data bearing on the association between "good" health habits and physical health status.

The idea that common habits such as hours of sleep, regularity of meals, physical exercise, cigarette smoking, and alcohol consumption may promote or detract from optimum physical health is generally accepted, but with little evidence. Two recently reported studies have provided some support for the hypothesis that "good" health practices are associated with positive health. Palmore in a study limited to 268 volunteers over the age of 60 found an association between exercise, keeping a moderate weight, avoiding smoking and illness and longevity measured several years later (3). Pratt combined a wide range of health practices into seven categories (sleep, exercise, elimination, dental hygiene, smoking, alcohol consumption, and nutrition) and examined these in connection with a study of the relationship between socioeconomic status and health in a sample of 401 mothers. Those with "good" personal health practices reported a higher level of health and fewer health problems (4). While suggestive, these studies were limited to highly selected populations.

Data collected in the Human Population Laboratory permit examining the question in a general population.

Methods

The data were gathered from questionnaires completed by a probability sample of adult (all persons over the age of 20, or those over 16 if they had ever been married) residents of Alameda County, CA, in 1965. Usable questionnaires were received from 6928 adults, or 86% of the enumerated sample (5).

A physical health spectrum was developed from answers to questions about disability, chronic conditions, impairments, symptoms, and energy level. Persons who reported trouble with feeding, dressing, climbing stairs, getting outdoors, or inability to work for 6 months or longer, were placed as severely disabled in category 1. Others who had merely changed hours or type of work or cut down on other activities were considered to have a lesser disability, category 2. Those who were not disabled but who reported two or more impairments or chronic conditions in the past 12 months, and those with only one chronic condition comprised the next two categories. A fifth group reported no disabilities or chronic conditions, but did have at least one symptom in the preceding year. The remainder who had no complaints, were subdivided into categories 6 and 7 on the basis of their answers to four questions relating to energy level.

The questionnaire items have been found highly reliable (6), and those about health status correspond favourably with medical records in circumstances where it has been possible to make comparisons (7).

As described in a previous paper (1), the seven categories of physical health, ranging from severe disability to a condition without disability, impairments, chronic conditions or symptoms and with great vigour, were converted into a scale on which the average values of a population or subpopulation were expressed by a "ridit" (8). The ridit value .50 is the mean for the population; high values indicate poor physical health, low values good physical health. A ridit of .60, for example, means that 60% of the population ranks higher on the spectrum, i.e., in our studies would have better physical health. Ridits can be adjusted for differences in certain characteristics of the population being studied (9,10). Since physical health tends to deteriorate with advancing age, and since women report more ailments than men, the ridits analysed below have been, unless otherwise noted, related to distributions by age and sex to allow for differentials due to these characteristics.

The Human Population Laboratory questionnaire also elicited information about things that might affect physical health status, including hours of sleep; eating, drinking and smoking habits; family life, employment and recreational activities; childhood history; medical care; and others. In this paper we deal with certain aspects of daily living that may be considered as personal habits related to health, including cigarette smoking, use of alcoholic beverages, sleeping habits, physical recreational activities, and nutrition as measured by regularity of meals and weight in relation to height.

Analysis

To consider physical health a dependent variable and health habits independent variables undoubtedly oversimplifies a complex relationship. Poor health may induce certain patterns of living, or be induced by them. Furthermore, the relationship may vary with different habits. Thus sleeping patterns may be affected by poor health or may "cause" poor health, but it seems less likely on the basis of considerable evidence that poor health "causes" cigarette smoking. As a first step in studying the possibly reciprocal relationships, however, physical health was taken as a dependent variable and current health practices were examined as independent variables. Small, but statistically significant (Chi-square test at .05), differences in the expected direction were found for every item.

Sleeping

As shown in Table 1, most respondents reported usually sleeping 7-8 hours and they had the most favourable physical health ridit (PHR). The physical health index of those who reported 8 hours of sleep was .48 and those with 7 hours was .49, both on the health side of the mean value of .50. Those who usually slept 9 hours or more were less healthy than average, and the group with 6 hours or less was the least healthy. Results were similar for men and women.

Eating

The data on eating habits suggest that erratic eaters have poorer health and that eating only regular meals is associated with good health. Those who ate breakfast almost every day or did not often eat between meals reported slightly, but significantly, better physical health than those who skipped breakfast or ate between meals.

For further comparison the population was grouped according to another indicator of eating habits, the relationship of weight to height in terms of a scale of desirable weights prepared by the Metropolitan Life Insurance Company (11). Table 1 shows the age/sex-related ridits separately for men and women of various weight categories. Being overweight is taken as an indicator of eating more than necessary to maintain desirable weight, given the physical exertion of the individual. For both men and women the relationship between overweight, especially the higher degrees of overweight, and poor health is evident. Men who were 10% or more underweight also reported poor physical health (PHR .57), but underweight women were not at such a disadvantage. Men with the best physical health were those less than 5% underweight up to 19.99% overweight; among women, those who were underweight or less than 10% overweight were slightly more healthy than the average.

Table 1. Age/sex related phyiscal health ridits by sex, by usual hours of sleep, eating habits, and weight for height

Item	Men			Women		
	Number	Age/sex-related ridit	95% confidence interval	Number	Age/sex-related ridit	95% confidence interval
Total	3518	.50	±.01	3770	.50	±.01
Usual hours of sleep						
6 hours or less	482	.56	±.03	568	.59	±.02
7 hours	1314	.49	±.02	1368	.49	±.02
8 hours	1135	.48	±.02	1473	.47	±.02
9 hr or more	220	.52	±.04	356	.51	±.03
Breakfast eaten						
Almost every day	2096	.49	±.01	2414	.49	±.01
Sometimes	563	.52	±.02	761	.52	±.02
Rarely or never	489	.51	±.03	585	.53	±.02
Eating between meals						
Rarely or never	880	.49	±.02	840	.49	±.02
Once in a while	1414	.48	±.02	1741	.49	±.01
Almost every day	853	.54	±.02	1176	.52	±.02
Weight for height						
10% or more under desirable weight	206	.57	±.04	624	.49	±.02
5.0-9.99% underweight	261	.51	±.04	542	.47	±.02
Within 4.99% of desirable weight	798	.49	±.02	960	.48	±.02
5.0-9.99% overweight	521	.49	±.03	359	.48	±.03
10.0-19.99% overweight	767	.47	±.02	535	.50	±.02
20.0-29.99% overweight	377	.51	±.03	290	.53	±.03
30% or more overweight	204	.57	±.04	406	.59	±.03

Physical activity

For each of six recreational activities - active sports, swimming or taking long walks, working in the garden, doing physical exercises, taking weekend auto trips, hunting and fishing - respondents were asked whether they participated often, sometimes, or never. From Table 2, it is clear that only the last item, hunting and fishing, failed to differentiate persons along the physical spectrum. Those who participated often in recreational activities of any type (even weekend auto trips) had better physical health status than those who did not participate. Men who engaged often in active sports reported a PHR of .44, while those never engaging in active sports had poorer physical health status, expressed as PHR .54. For women, a similar difference was shown between those who often swam or took long walks and those who never engaged in these activities. Working in the garden and doing exercises differentiated those who were physically healthier than average only when this was a frequent activity.

Table 2. Age/sex-related physical health ridits by answers to questions on physical activities

Here is a list of active things that people do in their free time. How often do you do any of these things?	Age/sex-related ridits					
	Men			Women		
	Often	Sometimes	Never	Often	Sometimes	Never
Active sports	.44	.49	.54	.48	.47	.52
Swimming or taking long walks	.47	.49	.53	.46	.48	.55
Working in the garden	.48	.51	.52	.46	.50	.54
Doing physical exercises	.46	.50	.52	.46	.49	.53
Taking weekend automobile trips	.48	.50	.54	.48	.49	.54
Hunting or fishing	.49	.50	.51	.50	.50	.50

As a summary measure of physical activity Table 3 groups the population according to their responses to the first four items listed in Table 2. While taking weekend auto trips was associated with good physical health, this item was not included in the summary measure since it is not clearly physical activity. Hunting and fishing were excluded because of lack of differentiation. Those who reported often or sometimes engaging in active sports or swimming or taking long walks, and those who often gardened or did physical exercises were considered physically active; they had an average PHR of .49 for men and .48 for women. Persons who reported never doing any of these things had distinctly poorer physical health as shown by their higher PRH's.

Alcoholic beverage consumption

The questionnaire included items on how often wine, beer or liquor were consumed, and how many drinks were usually taken at one sitting. For the classification used here, respondents were placed in the category of the greatest frequency and the category of the largest amount of any one type of alcoholic beverage which they used (12). Some respondents who drank more than one type of liquor may have been underrated by this method.

Table 3. Age/sex-related physical health ridits by amount of physical activities

	Men			Women		
Amount of physical activity	Number	Age/sex-related ridit	95% confidence interval	Number	Age/sex-related ridit	95% confidence interval
Often or sometimes engage in active sports, swim, or take long walks, or often garden or do physical exercises	2775	.49	±.01	3009	.48	±.01
Sometimes garden or do physical exercises or did not answer	214	.58	±.04	439	.54	±.03
Never do any of these	169	.58	±.04	322	.64	±.03

Table 4 indicates that only those who reported five or more drinks at one sitting departed significantly from the average in respect to physical health. The PHR for men who drank that much was .54; for women, .60. Those who "never drink" did not differ significantly from those who drank moderately. Frequency of drinking was not associated with physical health.

Table 4. Age-related physical health ridits by alcoholic beverage consumption

	Men			Women		
Consumption of alcoholic beverages	Number	Age-related ridit	95% confidence interval	Number	Age-related ridit	95% confidence interval
Never drink	495	.52	±.03	1084	.50	±.02
Amount at one time						
1-2 drinks	1567	.49	±.01	2073	.49	±.01
3-4 drinks	767	.49	±.02	486	.51	±.03
5 or more	319	.54	±.03	110	.60	±.06
Frequency						
Less than 1 per week	937	.49	±.02	1493	.51	±.01
1-2 per week	769	.49	±.02	593	.49	±.02
More than 2 per week	951	.50	±.02	587	.49	±.02

Smoking

In view of the extensive evidence (13) on the relation between smoking and health, it is not surprising to find that those who had never smoked enjoyed better physical health than present or past smokers. The differences in physical health status, as measured by the PHR, relative to cigarette smoking are not as large as in the case of some other health practices. Men who had never smoked scored .47 compared with .51 for present and past smokers. Whether one inhales cigarette smoke and the extent of such inhalation appears highly correlated with physical health status.

Independence of relationships

All of the various indicators examined showed differences, usually small, in the expected direction in the physical health ridit. Regular meals, adequate sleep, near average weight, physical activity, and avoidance of smoking and excessive drinking were all positively related to health. One may ask whether these items are measures of the same underlying factor, or whether each reflects a different correlate of health.

Table 5 shows the number of persons with each good health habit in relation to the number who reported each of the other good health habits. The expected numbers (shown as denominators) are based on the distribution of answers to the questions if there were no association between the items. For example, 70.4% of the respondents said that they did not eat between meals, and 65.1% said that they usually ate breakfast. If there were no association between these items, we would expect 45.8% (70.4 x 65.1), or 3173 persons to state both that they did not eat between meals and usually ate breakfast. Actually, 3252 persons reported that they did not eat between meals and usually ate breakfast, a ratio of observed to expected of 1.02; thus only a few more than one might expect by chance answered both of these questions in the favourable direction.

Only two of the ratios in Table 5 differ from 1.00 by more than .05. Both of these relate to smoking and diet. Women who smoked were more likely to be in the desirable weight range than those who did not, and persons who reported that they usually ate breakfast were more likely to be nonsmokers. While many of the associations in Table 5 were statistically significant, they do not indicate any common factor substantially underlying the association between physical health status and the habits of daily life that were studied.

Additive effects

To determine whether persons who followed all or several of the practices which were associated separately with good physical health occupied a more favourable position on the physical health spectrum than those who followed fewer or none of the habits, we constructed a score based on the answers to the seven items discussed above. One point was credited for each of the following answers: usual hours of sleep 7 or 8; eat breafast almost every day; eat between meals once in a while, rarely or never; report weight within the range of 5% under and 19.99% over the desirable standard for weight for men, or not more than 9.99% over for women; often or sometimes engage in active sports, swim or take long walks, or often garden or do physical exercises; drink not more than four drinks at a time; never smoked cigarettes. Another score which weighted the answers according to the differentiating power of the responses to each individual item showed no advantage over the scoring system used here.

Table 5. Ratio of observed to expected numbers in response to health practice questions[a]

Item	Alcoholic beverage consumption <5	Hours of sleep (7-8)	No eating between meals	Physically active	Desirable weight, men (<5% under to 19.99% over)	Desirable weight, women (<10% overweight)	Usually eat breakfast	Never smoked cigarettes
Alcoholic beverage consumption <5	-	1.00	1.01	1.00	1.00	1.00	1.02[b]	1.04[b]
Hours of sleep (7-8)	4965/ /4943	-	1.01	1.03[b]	1.02	1.02[b]	1.03[b]	1.01
No eating between meals	4579/ /4556	3759/ /3722	-	1.00	1.02	.98	1.02[b]	1.01
Physically active	5410/ /5405	4530/ /4417	4053/ /4070	-	1.02[b]	1.04[b]	1.00	.98[b]
Desirable weight, men (<5% under to 19.99% over)	1865/ /1869	1644/ /1618	1537/ /1515	1868/ /1833	-	-	1.03[b]	1.02
Desirable weight, women (<10% overweight)	2406/ /2402	1913/ /1873	1674/ /1701	2069/ /1984	-	-	1.00	.92[b]
Usually eat breakfast	4313/ /4214	3529/ /3444	3252/ /3174	3775/ /3765	1421/ /1385	1594/ /1591	-	1.17[b]
Never smoked cigarettes	2659/ /2545	2099/ /2080	1942/ /1917	2230/ /2274	621/ /606	1095/ /1190	2077/ /1773	-

[a] Numerator = number responding favourably to both questions. Denominator = number expected to answer favourably to both, given the proportions responding to each.

[b] Association in the four-fold table significant by X^2 test at .01 level.

Table 6 distributes the survey population according to number of good health habits reported, along with both the crude physical health ridits and the age/sex-related ridits for each category. The crude ridit for the 668 persons who reported all of the good health practices was .43, while crude ridits for those who reported two, one or no good health practices were .60, .60 and .76, respectively. Since those who reported more good health habits were older than those who reported fewer, the use of age/sex-related ridit values increased the spread between the average ridits.

Table 6. Physical health ridits by composite score on selected health practices,[a] with average ages

Health practice score[b]	Number	Average age	Crude ridit	Age/sex-related ridit	95% confidence interval
Total	6928	44	.50	.50	±.01
7	668	46	.43	.41	±.02
6	1775	45	.48	.46	±.01
5	2105	44	.50	.50	±.01
4	1518	42	.52	.54	±.01
3	622	41	.55	.58	±.02
2	202	41	.60	.64	±.04
1	35	39	.60	.63	±.10
None	3	41	.76	.82	±.33

[a] A small number of respondents failed to answer each of these questions. The numbers ranged from 10 men on the drinking question to 141 on the physical activity questions. This method of scoring places all of the "no answers" in the negative category. It was felt that the slight bias introduced in this way was preferable to the bias which might have been secured by eliminating all of those who failed to answer any one of the items.

[b] Number of positive responses to the following items: usually sleep 7 or 8 hours; eat breakfast almost every day; eat between meals once in a while, rarely, or never; weight for men between 5% under and 19.99% over desirable weight for height; weight for women, not more than 9,99% over desirable weight for height; often or sometimes engage in active sports, swim or take long walks, or often garden or do physical exercices; drink not more than four drinks at a time; never smoked cigarettes.

In a previous paper (1) we have shown that the average physical health ridit has a strong positive relationship with age, and is slightly inversely related to economic status. Tests of the relationship between habits and physical health when these variables are constant are shown in Figures 1 and 2.

In every age group those who reported all seven favourable health habits had, on the average, better physical health than those who reported six. With one minor exception (persons over 75 years of age) there was a consistent progression toward better health at each age as the number of good health habits increased.

Figure 1 also shows that the average physical health status of those over 75 who followed all of the good practices was about the same as those 35-44 who followed fewer than three, i.e., both had an average PHR of .62. Similarly, those aged 55-64 who followed all seven good health practices were at the same level of physical health status as those 25-34, both having average PHRs of .51. In other words, the physical health status of those reported following all seven good health practices was consistently about the same as those 30 years younger who followed few or none of these practices. While few of the individual differences were statistically significant, the consistency of the general pattern is striking.

Fig. 1. Average physical health ridit by age group by number of health practices

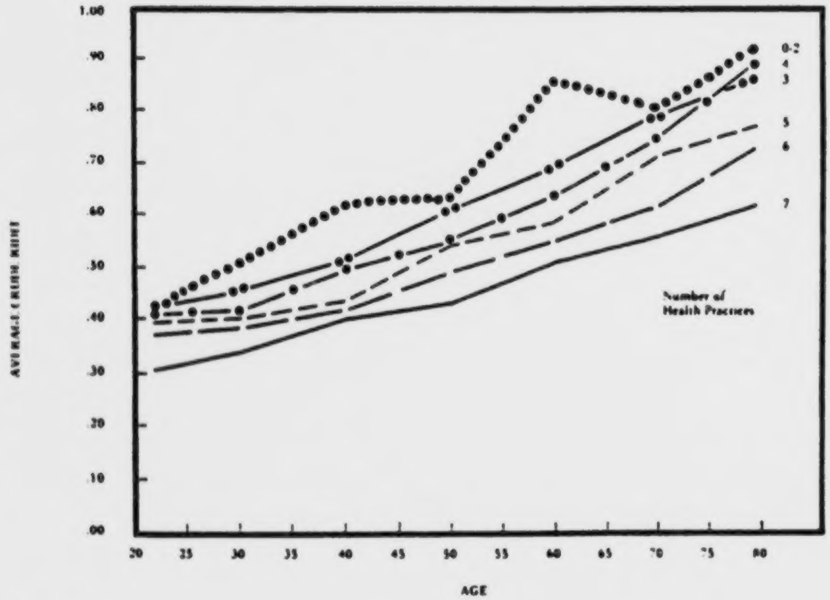
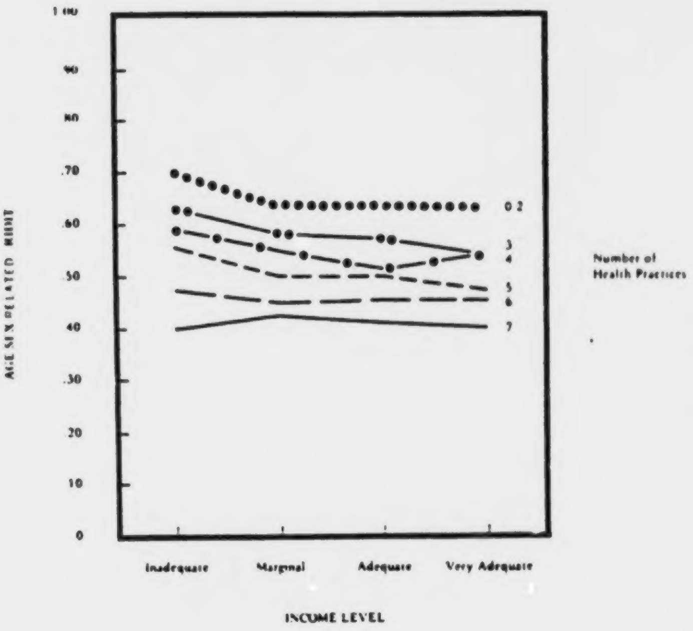


Figure 2, in which age/sex-related average ridits were plotted according to four income levels, shows that the difference in physical health status according to number of habit practices persisted when income was held constant. Income was defined in terms of family income and the number of persons in the household. Inadequate income included 13; marginal, 15; adequate, 46; and very adequate, 26% of the total. Plotting of the points at equal intervals on Fig. 2 does not imply that differences between these income levels are equal.

These data are consistent with the idea, and the temptation is great to conclude, that a lifetime of good health practices produces good health and extends the period of relatively good physical health status by some 30 years. It should be pointed out, however, that the average ridits used in this analysis include a wide range of individual health levels, and that the distributions of individual scores overlap a great deal. Further, with the exception of the question on smoking we have no information on the changes which may have occurred in health habits over the years. In each age group we are dealing with the survivors so that comparisons between age groups based on these data alone are hazardous. It should be noted, however, that the greater frequency of good habits among older persons is consistent with the view that those with bad health habits have died off. Seventeen per cent of those 75 and over reported following all of the good habits in contrast to 6-7% of those under 45.

Fig. 2. Average age/sex-related physical health ridit by income level by number of health practices



Conclusion

This analysis has shown that certain common habits of daily life, called good health habits, are positively related to physical health status. Further, the relationship of these habits was shown to be cumulative; those who reported all or many of the good practices were in better physical health, even though older, than those who followed fewer such habits. These relationships were independent of economic status.

The extent to which good habits contribute to the longevity of those who report many such habits, or persons acquire such habits as they advance in years, can be determined only by a longitudinal study.

REFERENCES

1. Belloc, N. et al. Measurement of physical health in a general population survey. American journal of epidemiology, 93: 328-336 (1971).
2. Berkman, P. Measurement of mental health in a general population survey. American journal of epidemiology, 94: 105-111 (1971).
3. Palmore, E. Health practices and illness among the aged. The gerontologist, 10(4): 313-316 (1970).
4. Pratt, L. The relationship of socioeconomic status to health. American journal of public health, 61: 281-291 (1971).
5. Human Population Laboratory. Alameda county population, 1965. State of California Department of Public Health, Series A, No. 7, 1966 p.79.
6. Hochstim J., & Renne, K. Reliability of response in a sociomedical population study. The public opinion quarterly, 35: 69-79 (1971).
7. Meltzer, J. & Hochstim, J. Reliability and validity of survey data on physical health. Public health report, 85: 1075-1086 (1970).
8. Bross, I. How to use ridit analysis. Biometrics, 14: 18-38 (1958).
9. Kantor, S. & Winkelstein, W. The rationale and use of ridit analysis in epidemiologic studies of blood pressure. American journal of epidemiology, 90: 201-213 (1969).
10. Kantor S. et al. A note on the interpretation of the ridit as a quantile rank. American journal of epidemiology, 87: 609-615 (1968).
11. Metropolitan Life Insurance Co. Overweight, its prevention and significance, 1960, p. 5.
12. Knupfer, G. & Room, R. Age, sex, and social class as factors in amount of drinking in a metropolitan community. Social problems, 12: 225, 1964.
13. National Center for Health Statistics. Cigarette smoking and health characteristics, Series 10, No. 34, 1967.

III. REDEFINING THE PARADIGM

HEALTH PROMOTION: A DISCUSSION DOCUMENT ON THE CONCEPT AND PRINCIPLES[a]

Background

In January 1984 a new programme in "Health promotion" was established in the WHO Regional Office for Europe. It is the first programme of this kind in WHO and its development has had strong support from Member States. Planning began in 1981; since then a number of meetings, bringing together people from professional and academic disciplines and consumer groups, have helped to clarify the special approach of such a programme.

As part of the continuing process of programme development, a working group met in July 1984 to discuss "Concepts and principles in health promotion". This document is a result of that working group. It is designed to clarify some of the most important issues in relation to the development of policy and programmes in health promotion. It is not intended as a final statement, but as a focus for discussion on which to base the development of health promotion activities in Europe.

The group is fully aware that the development of priorities and practices for health promotion depends upon the prevailing economic and cultural conditions. In each country, region and district, health promotion should involve the full participation of all people in the development of their health.

Introduction

At a general level, health promotion has come to represent a unifying concept for those who recognize the need for *change* in the ways *and* conditions of living, in order to promote health. Health promotion represents a mediating strategy between people and their environments, synthesizing personal choice and social responsibility in health to create a healthier future.

Basic resources for health are income, shelter and food. Improvement in health requires a secure foundation in these basics, but also: information and life skills; a supportive environment, providing opportunities for making healthy choices among goods, services and facilities; and conditions in the economic, physical, social and cultural environments (the "total" environment) which enhance health.

---

[a] This document was issued as *Concept and principles of health promotion*: report on a WHO meeting. Copenhagen, WHO Regional Office for Europe, 1984 (unpublished document ICP/HSR 602/m01).

The inextricable link between people and their environment constitutes the basis for a socioecological approach to health and this provided the conceptual framework for discussions by the working group. The discussions were organized around four main themes - principles, subject areas, priorities for the development of policies, and dilemmas in health promotion.

Principles

Health promotion is the process of enabling people to increase control over, and to improve, their health. This perspective is derived from a conception of "health" as the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs; and, on the other hand, to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources, as well as physical capacities.

1. Health promotion involves the population as a whole in the context of their everyday life, rather than focusing on people at risk for specific diseases. It enables people to take control over, and responsibility for, their health as an important component of everyday life - both as spontaneous and organized action for health. This requires full and continuing access to information about health and how it might be sought for by all the population, using, therefore, all dissemination methods available.

2. Health promotion is directed towards action on the determinants or causes of health. Health promotion, therefore, requires the close cooperation of sectors beyond health services, reflecting the diversity of conditions that influence health. Government, at both local and national levels, has a unique responsibility to act appropriately and in a timely way to ensure that the "total" environment, which is beyond the control of individuals and groups, is conducive to health.

3. Health promotion combines diverse, but complementary, methods or approaches, including communication, education, legislation, fiscal measures, organizational change, community development and spontaneous local activities against health hazards.

4. Health promotion aims particularly at effective and concrete public participation. This focus requires the further development of problem-defining and decision-making life skills, both individually and collectively.

5. While health promotion is basically an activity in the health and social fields, and not a medical service, health professionals - particularly in primary health care - have an important role in nurturing and enabling health promotion. Health professionals should work towards developing their special contributions in education and health advocacy.

Subject areas

Health promotion best enhances health through integrated action at different levels on factors influencing health - economic, environmental, social and personal. Given these basic principles, an almost unlimited list of issues for health promotion could be generated: food policy, housing, smoking, coping skills, social networks. The Working Group sought to frame the general subjects for health promotion in the following areas.

1. The focus of health promotion is access to health: to reduce inequalities in health and to increase opportunities to improve health. This involves changing public and corporate policies to make them conducive to health, and involves reorienting health services to the maintenance and development of health in the population regardless of current health status.

2. The improvement of health depends upon the development of an environment conducive to health, especially in conditions at work and in the home. Since this environment is dynamic, health promotion involves monitoring and assessment of the technological, cultural and economic state and trends.

3. Health promotion involves the strengthening of social networks and social supports. This is based on the recognition of the importance of social forces and social relationships as determinants of values and behaviour relevant to health, and as significant resources for coping with stress and maintaining health.

4. The predominant way of life in society is central to health promotion, since it fosters personal behaviour patterns that are either beneficial or detrimental to health. The promotion of lifestyles conducive to health involves consideration of personal coping strategies and dispositions as well as beliefs and values relevant to health, all shaped by lifelong experiences and living conditions. Promoting positive health behaviour and appropriate coping strategies is a key aim in health promotion.

5. Information and education provide the informed base for making choices. They are necessary and core components of health promotion, which aims at increasing knowledge and disseminating information related to health. This should include: the public's perceptions and experiences of health and how it might be sought; knowledge from epidemiology, social and other sciences on the patterns of health and disease and factors affecting them; and descriptions of the "total" environment in which health and health choices are shaped. The mass media and new information technology are particularly important.

Priorities for the development of policies in health promotion

Health promotion stands for the collective effort to attain health. Governments, through public policy, have a special responsibility to ensure basic conditions for a healthy life and for making the healthier choices the easier choices. At the same time, supporters of health promotion within governments need to be aware of the role of spontaneous action for health, i.e. the role of social movements, self-help and self-care, and the need for continuous cooperation with the public on all health promotion issues.

1. The concept and meaning of "health promotion" should be clarified at every level of planning, emphasizing a social, economic and ecological rather than a purely physical and mental perspective on health. Policy development in health promotion can then be related and integrated with policy in other sectors such as work, housing, social services and primary health care.

2. Political commitment to health promotion can be expressed through the establishment of focal points for health promotion at all levels - local, regional and national. These would be organizational mechanisms for intersectoral, coordinated planning in health promotion. They should provide leadership and accountability so that, when action is agreed, progress will be secured. Adequate funding and skilled personnel are essential to allow the development of systematic long-term programmes in health promotion.

3. In the development of health promotion policies, there must be continuous consultation, dialogue and exchange of ideas between individuals and groups, both lay and professional. Policy mechanisms must be established to ensure opportunities for the expression and development of public interest in health.

4. When selecting priority areas for policy development a review should be made of:

- indicators of health and their distribution in the population
- current knowledge, skills and health practices of the population
- current policies in government and other sectors.

Further, an assessment should be made of:

- the expected impact on health of different policies and programmes
- the economic constraints and benefits
- the social and cultural acceptability
- the political feasibility of different options.

5. Research support is essential for policy development and evaluation to provide an understanding of influences on health and their development, as well as an assessment of the impact of different initiatives in health promotion. There is a need to develop methodologies for research and analysis, in particular to devise more appropriate approaches to evaluation. The results of research should be disseminated widely and comparisons made within and between nations.

Dilemmas

Health-related public policy will always be confronted with basic political and moral dilemmas, as it aims to balance public and personal responsibility for health. Those involved in health promotion need to be aware of possible conflicts of interest, at both the social and the individual levels.

1. There is a possibility with health promotion that health will be viewed as the ultimate goal incorporating all life. This ideology, sometimes called healthism, could lead to others prescribing what individuals should do for themselves and how they should behave, which is contrary to the principles of health promotion.

2. Health promotion programmes may be inappropriately directed at individuals at the expense of tackling economic and social problems. Experience has shown that individuals are often considered by policy-makers to be exclusively responsible for their own health. It is often implied that people have the power to comnpletely shape their own lives and those of their families so as to be free from the avoidable burden of disease. Thus, when they are ill, they are blamed for this and discriminated against.

3. Resources, including information, may not be accessible to people in ways that are sensitive to their expectations, beliefs, preferences or skills. This may increase social inequalities. Information alone is inadequate; raising awareness without increasing control or prospects for change may only succeed in generating anxieties and feelings of powerlessness.

4. There is a danger that health promotion will be appropriated by one professional group and made a field of specialization to the exclusion of other professionals and lay people. To increase control over their own health, the public require a greater sharing of resources by professionals and government.

Conclusions

The concept of health promotion is positive, dynamic and empowering which makes it rhetorically useful and politically attractive. By considering the recommended principles, subject areas, policy priorities and dilemmas it is hoped that future activities in the health promotion field can be planned, implemented and evaluated more successfully. Further developmental work is clearly required, and this will be an ongoing task of the WHO Regional Office for Europe.

TOWARDS A DEFINITION OF HEALTH EDUCATION AND HEALTH PROMOTION[*]

by
John Catford & Don Nutbeam

The term "health promotion" has come into common use over the last few years, and we have been keen supporters of this development. As a consequence there has often been lively discussion about the interrelationships between the terms "health promotion", "health education", "disease prevention" and "positive health".

The translation of a concept into a definition has its problems. By their nature definitions are summaries, and will inevitably be unsatisfactory. Subtleties of the objectives and processes are often missed. Nevertheless, we think it important that some statement is made so that there is common understanding about these terms. Our current view is as follows.

Health education

- Seeks to improve or protect health through voluntary changes in behaviour as a consequence of learning opportunities. It can include personal education and development, and mass media information and education.

- Personal education and development concerns improving knowledge about health, offering health risk advice, and promoting self-esteem and self-empowerment. Examples include the opportunities provided through teacher-pupil and doctor-patient contacts.

- Mass media information and education tends to be nonpersonal, and concerns raising public awareness, creating a climate of opinion and offering health risk information and advice. It can take the form of public relations, advertising, marketing, news information, and distance learning projects, e.g. through radio, television, newspapers, other publications.

Health promotion

- Seeks to improve or protect health through behavioural, biological, socioeconomic and environmental changes. It can include health education, personal services, environmental measures, community and organizational development, and economic and regulatory activities.

---

[*] This paper was issued in: Health education journal, 43(2/3): 38 (1984).

- Health promotion embraces the concepts of disease prevention as well as the notion of positive health - the promotion of a sense of physical and mental wellbeing. A major emphasis is to make the healthy choices, the easy choices. Health education is a core component, and it is unlikely that health promotion will succeed without it.

- Personal services designed specifically for health promotion comprise:

    preventive medicine services, e.g. immunization, family planning, hypertension screening and control;

    positive health services comprising individual and group programmes, e.g. smoking cessation, keep-fit, weight reduction.

- Environmental measures concern safeguarding the physical environment and making it conducive to health, i.e. at home, at work, on the road, in public places. Examples of these often traditional "public health" measures include provision of clean water, safe sanitation, pollution control, fluoridation, fire precautions, industrial safety measures, better road design, nonsmoking areas.

- Community development normally involves the mobilization of community resources, both human and physical. Activities might include the formation of self-help and pressure groups, and the development of local facilities and services.

- Organizational development usually concerns implementing policies within organizations which promote the health of staff and clients, such as the achievement of nonsmoking areas, exercise and changing facilities and healthy catering services.

- Economic and regulatory activities are primarily concerned with creating a social and economic environment which protects or improves health. Examples include fiscal measures, legislation, voluntary codes of practice and the widening of the availability of services and products conducive to health.

THE MANDALA OF HEALTH: A MODEL OF THE HUMAN ECOSYSTEM*

by
Trevor Hancock

Introduction

In recent years a major transformation in the understanding of health and disease has taken place. The emphasis has shifted from a simplistic, reductionist cause and effect view of the medical model to a complex, holistic, interactive, hierarchical systems view known as an ecological model. That shift may be so profound as to constitute a paradigm shift or a change in the collective mind set and world view regarding what the rules are and what is possible (1).

An ecololgical model of human health is consistent with the broad field of human ecology, which is "the study of the interactions of man and human society with the environment. It is concerned with the philosophy and quality of life in relation to the development of biological and geological resources, of urban and rural settlements, of industry and technology and of education and culture"(2).

To paraphrase Pierre Dansereau (3), human ecology is the study of the issues that lie at the intersection of environment and culture. Public health lies within the broad field of human ecology (4). A public health model of the human ecosystem, such as the one that follows, helps greatly to clarify the interaction of culture with environment within the context of the holistic, interactive, and hierarchical nature of health.

The mandala of public health

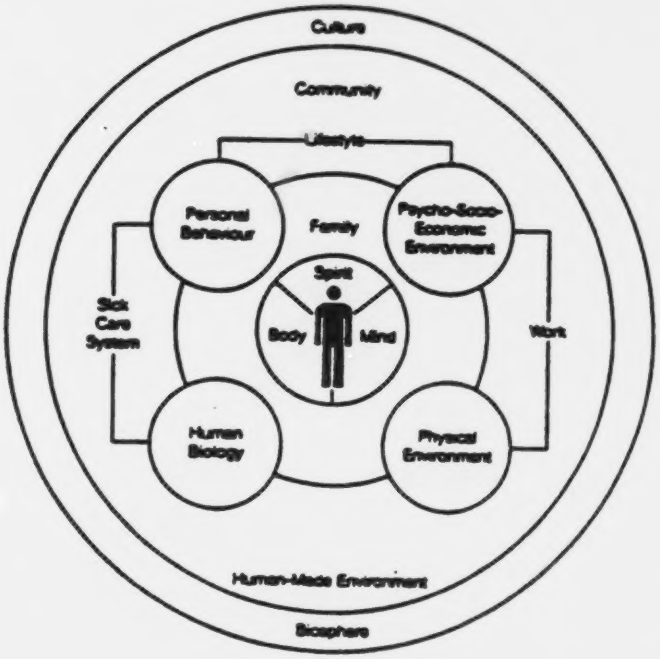
The mandala of public health (Fig. 1) was developed by the Department of Public Health, City of Toronto, to conceptualize and explain public health at a time when the Department was undergoing reorganization and revising its role and priorities (5-7). The tool is useful in teaching health science students and the general public, as well as in raising a number of contemporary public health issues.

In the mandala, a circular symbol of the universe, the individual - comprising body mind, and spirit - is seen as the centre or focus but is seldom viewed in isolation. Rather, he or she exists within a family that plays a vital role in establishing health values, attitudes, and habits and continuously influences the health of its members. In buffering people and sheltering them from the effects of the community and the culture, the family acts as perhaps the most important mediating structure between persons and social institutions (8).

---

* This article was published in Family and community health, 1985.

Fig. 1. A model of the mandala of health


Culture
Community
Lifestyle
Personal Behaviour
Family
Psycho-Socio-Economic Environment
Spirit
Body
Mind
Sick Care System
Work
Human Biology
Physical Environment
Human-Made Environment
Biosphere

Source: Department of Public Health, City of Toronto.

Four factors affect the health of individuals and of the family. These factors are based on the health field concept originally described in the Lalonde report (9). These factors as modified for the purposes of the mandala of health are:

(1) Human biology: the genetic traits and predispositions; the competence of the immune system; and the biochemical, physiological and anatomical state of the person and the family.

(2) personal behaviour: dietary habits, smoking and drinking; driving habits, including use of seat belts; general risk taking and preventive behaviours;

(3) psychosocial environment: socioeconomic status, peer pressure, exposure to advertising, social support systems, and related factors; and

(4) physical environment: adequacy of housing and the physical state of the workplace and the immediate environment.

The model emphasizes that lifestyle is not the same as personal behaviour but rather is personal behaviour as influenced, modified and constrained by a lifelong socialization process, as well as by the psychosocial environment, including family, community, cultural values, and standards. One's lifestyle, then, is chosen from a fairly narrow range of options.

The medical care system exists within a community of which it is a part and to which it is accountable; this system is concerned almost exclusively with human biology and personal behaviour. Hence, medical care tends to be a less important determinant of health than many of the other elements in the model.

Work (or its absence) is an important determinant of health. Both physical and mental health are influenced by the physical state of the worksite and the psychosocial aspects of work, including the work role, social relations and the quality of work life.

Each community has its own values, standards, support systems and networks and is therefore a major influence on health. Additionally, the community and human-made environment exist within a broader frame of reference that includes the biosphere and a western, democratic, technological, science-based, Judeo-Christian culture. Cultural values, attitudes and beliefs influence health, how people perceive health, and how they react to illness; however, the biosphere, of which the person is but one small and interdependent part, is the ultimate determinant of health.

Key issues illustrated by the mandala

The mandala can be viewed as a model of the human health ecosystem. Such a view of health is compatible with a systems hierarchy of health (10) and is a holistic model of health. Holistic models of health such as the mandala differ from holistic medicine. The latter refers to an expanded medical model that recognizes that health involves body, mind and spirit; this model often fails to recognize the influence of family, community, society, and the planet. Holistic medicine often assumes an individualistic and even victim-blaming approach, thereby failing to recognize the need for social and political action to deal with problems in the physical and social environments (11). Holistic medicine, while clearly an improvement over traditional allopathic medicine, simply does not go far enough. In contrast, the mandala implies that the health of individuals is intimately bound up with their physical and social environments and that actions within the community and a broader culture are important determinants of health.

The model also integrates the natural sciences with the social sciences. Health, then is dependent on the judicious application of human knowledge in a complete range of social and natural sciences. By so uniting the sciences, the model conforms to the notion that there are two fundamental principles of public health: ecological sanity and social justice (12). The former states that human health is dependent on a healthy, stable and safe ecosystem, and activities that impair the health of the ecosystem are viewed as ecologically insane and a threat to human health. The latter principle states that health depends on a just and equitable distribution of wealth and thus of health. It purports that health care must be distributed on the basis of social justice rather than market justice and that the disadvantaged must be protected from those who seek to exploit them at the cost of their health.

This model, then, is dynamic and interactive. It is dynamic in that the effects within the model act in two directions: the health of individuals is influenced by any or all factors in the model; and each factor can be influenced by the person acting alone or in concert with other people. Interactive means that the various components of the model act on and interact with each other. They either reinforce or cancel out one another.

The mandala and high-risk populations

This model of health has several important implications for those who work with high-risk populations. First, being at high risk can result from one or more of a variety of different factors. Frequently these factors (such as cigarette smoking) interact. While smoking is a personal behaviour, it is influenced by whether family members smoke, by peer pressure, and by advertising. Some groups are at high risk for adopting this habit by virtue of their sex. Women have, for the past two decades, been targeted for advertising by the tobacco industry. Additionally, smoking is more acceptable in some communities and socioeconomic groups than in others. The medical care system has clearly played a role in educating the general public and individual patients about the dangers of smoking, although it has comparatively little to offer to those who develop such smoking-related diseases as lung cancer or emphysema. Some populations are clearly high risk in biological terms, including the fetuses, infants and people with pre-existing diseases or disorders (e.g. a-1-antitrypsin deficiency) that are exacerbated by tobacco smoke. For these persons, their workplace may place them at undue risk because of secondhand smoke.

Finally, some societies are at greater risk than others because their cultural, political, or economic institutions do not protect them from hazards. This is particularly true of many developing nations to which the tobacco companies are now turning their attention. On the other hand, citizens of countries such as Finland, Norway and Sweden are at less risk because of the strong antimsoking policies that have been adopted at the national level. The issues raised here are not unique to smoking but are true of many of the major health issues of our day. The determinants of health are complex, interactive and hierarchical.

The second important implication of the ecosystem model of health is that health problems cannot be solved through simplistic approaches that ignore the complex reality of the human ecosystem. This is particularly true of the individualistic "lifestyle" approach to health problems that purports that all one has to do is teach people to behave sensibly and then all will be well. Such victim-blaming approaches have not worked in the past and will not work in the future. Furthermore, blaming the victim ignores the determinants of healthy (or unhealthy) behaviour and thus excuses the community, society and environment within which the individual lives. Any attempts to help those at high risk must be multifaceted and must take into account the full range of determinants of health at the personal, community and societal level.

This leads to a third implication: the human ecology approach to health problems, to the identification of those at high risk and to the means of helping those at high risk, inevitably must confront the social and political nature of health at the personal, community, and societal level. This should not come as a surprise. Even in viewing the science of ecology itself (in the usual biological sense of the word), Sears (13) saw it as a potentially subversive science and wondered whether "if taken seriously as an instrument of the long-run welfare of mankind would it endanger the assumptions and practices accepted by modern societies, whatever their doctrinal commitments" (13).

If that can be said of the science of ecology as a whole, how much more must it be true of human ecology (and thus public health), which deals with the cultural, social, political and economic aspects of man's social ecosystem. In such circumstances, as Bookchin (14) has noted, "Ecology is intrinsically a critical science - in fact critical on a scale that most radical systems of political economy failed to attain" (14, p. 6).

Thus it is important to identify and examine the many political issues involved at the various levels of the human ecosystem hierarchy identified in the mandala - personal and family, community, and society/culture - if effective action with and on behalf of high-risk populations is to be undertaken.

High-risk populations and the politics of health

The politics of health as they affect the individual, the mediating structures of family and community, and the wider society or culture merit attention here. In all these areas (which, it should be noted, are the major levels of the mandala), issues of power, relationships, differing values and their impact on resource allocations abound, as do issues dealing with the structure and functioning of communities and society as a whole.

Health politics of the individual

The individual is at the centre of the ecosystem model of health. What are the circumstances that put an individual at high risk? Since human biology is an important determinant, our task is to identify those at high risk through genetic, prenatal, and other forms of screening and counselling. But beyond the merely biological is the individual's ability to handle life events in a healthy way. As Antonovsky (15) noted, the real miracle is why and how anyone at all is healthy, given the myriad threats to good health. He concluded that health is to a great extent dependent on a good "sense of coherence" - a sense that life is comprehensible (makes sense and has some order and organization), manageable (predictable and controllable by oneself or others that one trusts), and meaningful (16).

The question then becomes how one creates a sense of coherence for people, or helps them to attain a sense of coherence. The answers must include imbuing people with a sense of personal self-worth a sense of being needed or loved, an ability to influence and control their own environment, and an ability to manage their own problems. The importance of a positive self-concept of physical and mental health cannot be understated, and it is necessary to devise ways of maximizing the coping skills and the sense of self-worth that is given to children by their parents, their immediate associates, and the school system. This concept of self-worth must be reinforced by school, work and social situations, and support systems that ensure that people have some meaningful control over the circumstances of their lives. Mindless schooling, meaningless work, and disempowered communities are antithetical to good health (17).

One of the crucial areas of concern with respect to an individual's coping ability and sense of self-worth is the nature of his or her interaction with the "helping system", which includes health care professionals. Often, an individual's innate ability (and need) to cope is destroyed by a domineering system that encourages passivity and by individual "helpers" who take over and run the client's life. The impacts of such a system are not limited simply to the individual (clinical iatrogenesis) but have widespread impact on social processes and indeed the entire culture (social and cultural iatrogenesis) (18).

One approach that can be taken by public health care professionals is to see themselves as "guides" rather than doers, helpers, or even teachers. A guide is someone who knows an area, or a part of the journey, well. (We hire them when we need them and let them go when we have finished that part of the journey or when we have learned our own way.) The concept of guided self-management is a powerful one and is important in helping to free the individual from the shackles of the health care system. Thus, at the level of the individual, it is necessary to ensure that families, schools, workplaces and communities strengthen and empower the individual, constantly adding to and reinforcing each individual's sense of self-worth and ability to influence his or her own life.

Health politics of the community

In addition to the many community issues mentioned above, there is a host of other community issues that affect health. These include air and water quality, adequacy of food and housing, income levels, the safety of the workplace and the quality of working life, the educational system, the community support network, and the adequacy and quality of health and social services. However, in terms of a community and its functioning, perhaps the most important determinant of health is the extent to which the community is organized. A well organized and empowered community can cope with any of the above issues and many others that have an impact on health, whereas a disorganized and disempowered community cannot, or at least not nearly as effectively.

To a great extent, the ability of a community to organize effectively is dependent on the strength of the mediating structures (8). These are the structures that intervene between the individual and the institutions of the larger society. They include family, churches, voluntary associations, and neighbourhood community groups. According to McKnight (19), the relationship between institutional strength and community strength is inverse. Strong institutions result in weak associational life, and, therefore, strong associational life and empowered communities require that institutions deliberately give power back to the mediating structures. In health terms, McKnight and his colleagues have developed a health action model, the goal of which is to strengthen communities through actions around health issues. The goal is not to improve the health of the community per se; that is considered to be an inevitable consequence of strengthening the community. The health action model involves identifying health problems in the community that have their root causes in social and environmental factors and are amenable to community action to modify or remove the health-threatening factor. By identifying these factors and exploring with the community ways in which the community can deal with these factors, the community is empowered, and at the same time some action is undertaken with respect to the adverse factors (19,20). Those who live within disempowered communities are at high risk, and their sense of personal and community coherence can be expected to be low.

Another important aspect of the politics of health at the community level as it relates to high-risk groups is the politics of work. Work is a vitally important part of the lives of many if not all of us. The politics of work have to do with three major issues: the availability of work, the hazards of the workplace, and the quality and meaningfulness of the work life.

Unemployment is perhaps one of the most devastating things that can happen to an individual in our society. It takes a severe toll on the individual's and the family's physical and mental health. Clearly, unemployed persons and their families are at high risk, as are communities where unemployment is high or chronic. The availability of work within the community is thus an important health issue, both at the community level and at the societal level (21).

The organization and nature of work and the presence in the work environment of health-threatening situations has long been the source of political friction. Occupation-related illness and injury are far more widespread than is usually recognized, and more days are lost to sickness and injury each year than are lost because of strikes. The provision of safe and healthy working places is an important and intensely political issue at both the community and the societal level. The right of workers to safe and healthy working conditions is increasingly recognized. None the less, there is still much that needs to be done. Those particularly at risk include workers in small and unorganized working places, farm workers, migrant workers, and those in the mining, forestry and construction industries.

The third aspect of the politics of work has to do with the meaningfulness of work and the quality of working life. One important study (22) has suggested that work satisfaction (maintaining a useful and satisfying role in society) is the best overall predictor of longevity especially in older males. The issues of work satisfaction, quality of work life, the meaningfulness of work, and other related issues have received little attention to date; they surely deserve more attention in the future. They raise important points related to the nature of power in the workplace, the democratization of work, the sharing of profits, and other political issues. Emery (23) has suggested that one of the most "toxic" aspects of work is the shame to which workers are often subjected by being treated as mindless, childlike automatons with no useful ideas and with little or no control over their own work. Clearly, those working in such conditions are also at high risk for developing health problems, perhaps as a result of the low sense of coherence that their jobs engender.

The health politics of society

As the mandala of health indicates, the medical care system is only a comparatively small component in the totality of issues affecting health. The Lalonde (9) report, and much preceding and subsequent work, has stressed that environment and lifestyle are the major determinants of health. None the less, it is impossible to ignore the fact that for much of the public, for most of the politicians, and for most health care professionals, it is the medical care system and the economics of that system that occupy most if not all of their attention. In a sense, everyone is at high risk if society continues to misallocate scarce resources to ever more expensive and less humanizing means of adding a few weeks or months to life, instead of to effective health promotion and disease prevention measures intended to add both years to life, health to life, and life to years.

Many of the factors that will lead to improved health do not even fall within traditional health policy fields (24,25). For example, in Canada, two of the more effective methods of reducing motor vehicle accident mortality have been the imposition of the 55 mph speed limit (an energy policy) and the introduction of seat belt legislation (a transport policy). Consumption of health damaging products such as alcohol and tobacco can be reduced by increasing the price (a fiscal policy) or by altering the subsidies, incentives, and other policy measures that influence the crops that are grown (an agricultural policy). Similarly, a switch from a high meat diet to the sort of prudent diet advocated by the American Cancer Society and the American Heart Foundation would require dramatic changes in agricultural policy. Clearly, while the high-risk populations are substantial, there is little that health care professionals can do other than in the areas of advocacy and education.

One extremely important high-risk group is, of course, the poor. Inequalities in health care are particularly dramatic when viewed by income category. For example, in 1978 life expectancy among Canadian males was estimated to be roughly seven years lower for those in the lowest income quintile compared to those in the highest income quintile. Not only was their life expectancy lower, but their disability expectancy was greater. As a result, Canadian males in the lowest income quintile had a disability-free life expectancy of 50 years compared to 64 years for males from the highest income quintile (26). While the high-risk group is easy to recognize, the role of health care professionals, at least through the health care system, is limited. Clearly, most if not all of the major determinants of health identified in the mandala are acting together in this instance: low self-esteem, poor education, poor housing, disempowered communities, unemployment or bad working conditions, family and peer pressure to adopt unhealthy and risk-taking behaviours. As recent experience from the United Kingdom shows, inequalities in health are not readily remedied by providing more health care services (27). Instead, it seems that a more equitable distribution of society's resources is called for (27).

If this unequal distribution of health is true at the national level among developed nations, it is even more dramatically true at the global level. Here, the high-risk populations are those of the developing nations in general and in particular those who live in the rural areas or in the burgeoning slums of the world's overpopulated cities. Improving the health of this huge high-risk population calls for herculean efforts centred around WHO's primary health care strategy, if the target of "health for all by the year 2000" is to be attained (28).

Finally, one cannot leave the topic of global health without noting that the largest high-risk group of all is *homo sapiens*. Faced by the spectre of full-scale nuclear war and the subsequent nuclear winter (29), all other health hazards pale by comparison. Unless everyone acts now to stop the senseless arms race, there may be no human ecosystem, no high-risk population, no population at all.

REFERENCES

1. Kuhn, T. The structure of scientific revolutions. Chicago, University of Chicago Press, 1970.

2. Commonwealth Human Ecology Council, London, England.

3. Dansereau, P. Cited in: Human ecology in the Commonwealth. London, The Commonwealth Foundation, 1972 (Occasional paper No. 14, pp. 33-34).

4. Kartmann, L. Human ecology and public health. American journal of public health, 57(5): 737-749 (1967).

5. Public health in the 1980s. Department of Public Health, Toronto, Ontario, Canada, 1978.

6. Hancock, T. Public health planning in Toronto: 1. Conceptual planning. Canadian journal of public health (to be published).

7. Baxter, D. Public health planning in Toronto: 2. Program planning. Canadian journal of public health (to be published).

8. Berger, P. & Neuhaus, R. To empower people: the role of mediating structures in public policy. Washington, DC, American Enterprise Institute, 1977.

9. A new perspective on the health of Canadians. Ottawa, Department of Health and Welfare, Canada, 1974.

10. Brody, H. The systems view of man. Perspect biol med. 17(1): 71-92 (1973).

11. Guttmacher, S. Whole in body, mind and spirit: holistic health and the limits of medicine. Hastings cent rep, 9(2): 16-21 (1979).

12. Hancock, T. Ecological sanity and social justice: public health in the age of Osiris. Alternatives, 9(4): 11-18 (1981).

13. Sears, P. Ecology: a subversive subject. Bioscience, 14(7): 11-13 (1964).

14. Bookchin, M. Ecology and revolutionary thought. New York, Times Change Press, 1970.

15. Antonovsky, A. Health, stress and coping. San Francisco, Jossey-Bass, 1979.

16. Antonovosky, A. The sense of coherence as a determinant of health. Advances, 1(3): 36-50 (1984).

17. Albee, G. Preventing psychopathology and promoting human potential. Am Psychol, 37: 1043-1050 (1982).

18. Illich, I. Limits to medicine (medical nemesis). London, Marion Boyars, 1976.

19. McKnight, J. Politicising health care. Social policy, 9: 36-39 (1978).

20. Coonley, R. A model for community-based health action and primary prevention: a demonstration project. Evanston, IL, Center for Urban Affairs, Northwestern University, 1978.

21. Kirsh, S. Unemployment: its impact on body and soul. Toronto, Canadian Mental Health Association, 1983.

22. Palmore, E. The relative importance of social factors in predicting longevity. In: Palmore, E. & Jeffers, F., ed. Prediction of life span. Lexington, MA, DC Heath, 1971.

23. Emery, F. Public policies for healthy workplaces, beyond health care: proceedings of a conference on healthy public policy. Canadian journal of public health, 76(Suppl. No. 1): 46-50 (1985).

24. Hancock, T. Beyond health care: creating a healthier future. Futurist, 16(4): 4-13 (1982).

25. Beyond health care: proceedings of a conference on healthy public policy. Canadian journal of public health, 76(Suppl. No. 1): 1-104 (1985).

26. Wilkins, R. & Adams, O. The healthfulness of life. Montreal, Institute for Research on Public Policy, 1983.

27. Townsend, P. & Davidson, N. Inequalities in health. Markham, Ontario, Penguin Books, 1982.

28. Mahler, H. The Meaning of "Health for all by the year 2000". World health forum, 2(1): 5-22 (1981).

29. The effects of nuclear war on health and health services. Geneva, World Health Organization, 1984.

HEALTH EDUCATION VERSUS HEALTH PROMOTION - A PRACTITIONER'S VIEW[a]

by
Howard Seymour

Recently, a darkening cloud of conflict and uncertainty has enveloped the world of health education. The observer, sitting on the sidelines, must have been left in a state of bemused confusion to hear the claims of health promoters to be particularly concerned to change political, environmental, social and economic factors which affect health, or the health educators' claims to influence the "hidden curriculum", the context in which health education occurs.

It sometimes seems that the difference is best illustrated by a series of dichotomies:

holistic - reductionist
individualistic - societal
optimistic - pessimistic
building new behaviours - eliminating old behaviours

Which side, however, would claim to be on the various ends of these dichotomies is not clear.

The common analysis of this situation is that some writers have seen health education and health promotion as two entirely separate entities, while others see them as overlapping. The difference between these analyses can often be explained by the different backgrounds, stances and interests of the analysts. These can usually be classified as falling into one of the following groups: the academic view; the practitioner view; the concepts of health held.

The academic view resides in theoretical ideas about the meaning of education and ways of gaining improvement in people's health. Interesting though these arguments are,[b] they do not in the end help in clarifying the practice of health education/promotion. Health education practices do not necessarily fit the purest definitions of the academics.

---

[a] This paper was issued in Health education journal, 43(2/3): 37 (1984).

[b] Tones, K. Education and health promotion, new direction. Journal of the Institute of Health Education, 21: 121-129 (1984).

Health education officers are involved in at least three types of health education. I have called these, for want of any better titles, "traditional", "educational" and "new wave" health education. These categories cover a very wide range of activities:

Traditional health education	Information on health issues - Exhortation to individuals to change Campaigns aimed at informing people about health problems
Educational health education	Training of health professionals, etc. in education methods Curriculum development Community health work Group work and personal development
New wave health education	Support of pressure groups, e.g. women's groups, ethnic minority health groups Policy change - catering/smoking policy

Classified in this way, it is easy to see how the work of health education officers links with the various perceptions of health promotion. There are normally three ways in which health promotion is viewed; the razzmatazz approach; the preventive services and information approach; and a definition of health promotion which covers all ways of promoting people's health, including both health education activities and change at a political, social and economic level.

It would seem, then, that health promotion and health education are not unitary activities, but when looked at in detail, from the point of view of their practice, all mirror various aspects of each other.

The definition of health promotion which aims at the "positive pursuit of fitness and wellbeing by means of a whole range of activities, including health education, legal and environmental controls and influence on social and economic factors" is probably the most useful definition to follow. It is not limited to the inappropriate use of traditional health education activities, but can use the razzmatazz and preventive approach when these are called for. It also has its roots in "new wave" health education and can develop this line of approach.

When viewed from the point of view of practice, both health education and health promotion seem to overlap in many, if not all, respects.

What, then, are the differences? They are certainly not in content. There is, however, a distinct benefit to using the term "health promotion" to cover all the activities covered in gaining change in people's health at individual, group, organizational and community level. The term "promotion" can overcome sterile arguments about what is or is not education. For example, is changing the fat content of food in hospital catering systems an educational activity? Whether it is educational or not, it most certainly has the potential for the promotion of people's health.

The only other difference would seem to be in terms of who can practise health promotion or health education, and the interlinked questions of who is in control. There would seem to be an interest in health promotion using more outside expertise and involving more people with a wider range of skills than at present deployed in health education. Health promotion may aspire to be organized differently from the way health education is at present, but organized differently to undertake the same aims.

The question of aims brings into focus perhaps the most interesting, least talked about, but most fundamental aspect of the health education/ promotion debate. This is the question of what we are aiming to improve: that is health. It is, however, my contention that much of the disagreement relates to unstated beliefs about what is being promoted. Again, though, the argument is not distinctly between the health promoters and the health educators. It is of fundamental importance in both these fields to be clear about what one is trying to improve. In health education circles it has been commonly found that people often view their health at three different levels.

Firstly, I'm healthy when I've not been ill recently (disease avoidance). Secondly, irrespective of illness, I have my health if I can cope, I can deal with what the world throws at me, I perform adequately with what I, my family and others expect of me (coping). Thirdly, health is an ephemeral phenomenon, a perception, a feeling of energy and control, "being on top of things, knowing that I can make things happen" (control).

Health promotion may lead to new and innovative ways of organizing the delivery of services to improve health. If, however, health education is relegated to "educational health education" activities only, a serious and positive look must be taken at the future of health education officers and health education units, particularly in view of their role in traditional and "new wave" health education approaches.

PRIMARY PREVENTION AND HEALTH PROMOTION IN MENTAL HEALTH[a]

by
Harold L. McPheeters

Despite frequent pleas for mental health programmes to devote more resources to primary prevention, mental health programmes remain overwhelmingly oriented to treatment. Prevention is given low priority because many psychiatrists who are leaders in the mental health field are focused on a medical/pathological model of prevention that has limited usefulness in mental health and because the guidelines for a social-behavioural model are not always clear.

A model for conceptualizing and programming of primary prevention and promotion in all of the human services is offered with special attention to mental health functioning. Strategies for both primary prevention and promotion may be directed to individuals or to the environment, but, in either case, the targets and the strategies must be clearly identified. Prevention strategies are directed towards persons under some specific stress or risk, while promotion activities are directed to persons in normal situations of growth and development. For either prevention or promotion, the most widely effective strategies are those that require the least personal cost and effort - usually the strategies that are directed towards the environment.

Prevention and promotion both depend on clear assessment of the stresses and needs and must be evaluated. Programmes are often too global or too diffuse to be effective or credible. Working in closed social systems and sharp evaluation will help correct these problems.

Concepts of primary prevention in mental health

There has been considerable controversy over primary prevention in mental health. The traditional public health concept of primary prevention is "activities or programs to prevent an illness or disease condition from occurring". The epidemiological model of prevention is based on the notion of: (a) a causative agent, (b) a susceptible host, and (c) an environment that brings them together. Many psychiatrists continue to think in terms of this epidemiological model and reject primary prevention in mental health because there is no single causative agent in most mental disorders. However, a few of the organic psychoses, such as central nervous system syphilis and lead encephalitis, have responded to this model.

However, long ago even the medical profession moved away from this epidemiological model of prevention. In 1954, Iago Gladston (1) suggested that deprivation and stress are important causative factors in health and disease. Many diseases are known to have multiple causes, and preventive programmes are often built on this concept. Thus there have been programmes to prevent vitamin deficiency dementias, and programmes to assure adequate prenatal nutrition to prevent certain forms of mental retardation and childhood behaviour disorders. Many psychiatrists remain focused on these concepts of a medical/pathological model of prevention. Since there is often no demonstrable physical stress or deficiency, these psychiatrists reject the idea of devoting resources and efforts to prevention.

---

[a] This article was published in Preventive medicine, 5: 187-198 (1976).

Much of medicine is much more flexible, however, and recognizes that many physical disorders, such as hypertension and cancer, have many causes and many associated factors that provide a basis for conducting prevention programmes. It may not be possible to totally eliminate some of these more complex disorders, but it surely is possible to do some prevention to reduce the prevalence of the disorders.

Most psychiatrists have been strongly oriented by their medical training to the medical/pathological concept of prevention. There have been some dramatic examples from this approach, and much more work is needed in this area. However, as Eisdorfer (2) has noted, much preventive work can be done on the basis of a social adaptive model of prevention of mental disorder as well. Little has been said by most psychiatrists about psychological and social approaches to primary prevention. Psychologists, social workers, and educators have given the social adaptive model much more attention.

In the social adaptive model, the mechanisms become more complex and less sharply defined. The model is especially applicable to the emotional disorders rather than to the mental illnesses. The model postulates a complex "web of causation" of life stresses. Much of it is based on a psychogenic hypothesis that emotional behaviours are learned in early childhood and that they influence later emotional health or disorders. There is ample documentation in the literature that this is true. Nevertheless, there is much less evidence that preventive strategies aimed at changing childrearing practices and early childhood development will have a later effect of reducing emotional or mental disorders in the adult years.

Bloom (3) suggests that the mental health enterprise should proceed on the assumption that preventive strategies of this kind will have an effect. He notes that:

> " ... preventive activities have been significantly more powerful than treatment in reducing the prevalence of most disease. This is true for both the infectious as well as the nutritional diseases and should be equally true for the vast reservoirs of the chronic conditions among which will be found mental disorders. Long before the advent and acceptance of germ theory with its implications of specific diagnosis and disease-specific treatment, the sanitarians and humanitarians had combined to indict odors and odor-producing filth as the cause of all disease and to propose a massive clean-up campaign and sewage disposal system as a disease preventive. The emphasis on cleanliness and on the eradication of miasmas or noxious odors had enormous consequences for disease incidence ... The current community mental health movement, with its occasional emphasis upon the removal of existing accumulations of psychic sewage and its efforts to prevent its further accumulation is a logical and most appropriate descendant of the sanitary awakening of more than a century ago, and we have much to learn from the miasmatists of old."

There are variable mechanisms for implementing programmes of primary prevention according to this model. The major strategies have been: (a) intervention at crisis times in individuals' lives to give them consultation assistance, (b) providing individuals with anticipatory guidance for handling the stresses of their lives, and (c) consultation to agencies and programmes to alter the balance of social-psychological pressures and problems on people.

Others have suggested that simply by altering the quality of life for individuals would be an effective strategy for primary prevention - especially if it were based on some of the documented impacts of family breakdowns, poor housing, poor nutrition, poverty, etc., on the mental health of children and adults.

The concept of promotion of positive mental health

The concept of promoting positive mental health or attempting to enhance personal and interpersonal functioning without regard to whether the activity is targeted to preventing some disorder or disability has received little attention by psychiatrists. Meanwhile other mental health professionals, such as Marie Jahoda (4), have explored the concepts of positive mental health and identified such components as attitudes toward one's self, self-actualization, perceptions of reality, autonomy, mastery of one's environment, and integration of personality. Others add relatedness to people, curiosity, creativity, and coping strength in crisis. Ringness (5) describes it: "Mental health consists of being able to function successfully in terms of one's own goals, abilities and opportunities within the context of one's social and physical environment".

Nevitt Sanford (6) goes so far as to ask whether the concept of prevention is necessary or useful. He suggests that the mental health establishment should use its resources in building-up activities rather than in preventing particular problems. He acknowledges that the notion of promotion of positive mental health is fraught with value judgements that may be time- and culture-bound and that may become controversial, but he believes that certain concepts, such as competence and wholeness, are likely to be acceptable objectives in almost everyone's value system.

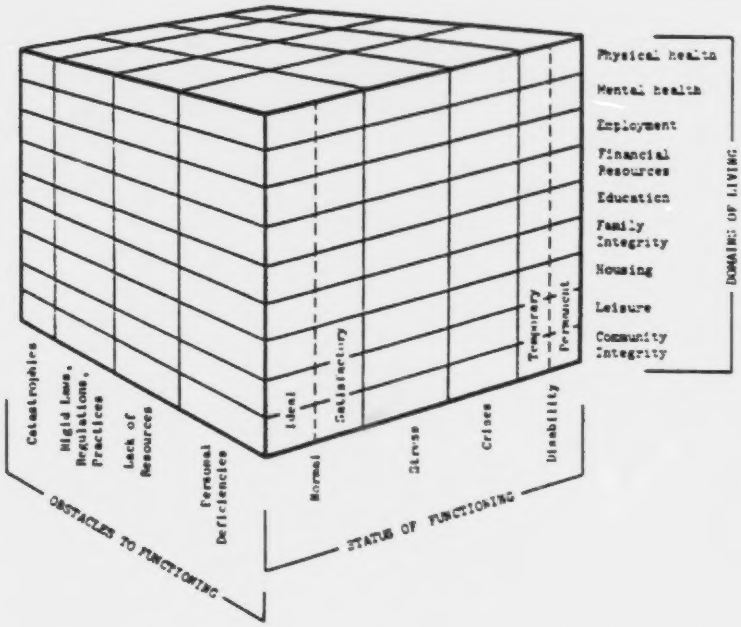
At any rate, the concept of positive mental health is not the cult of happiness, nor the cult of adjustment. It is comparable to those programmes of physical fitness and nutrition that are targeted to improve physiological performance for large groups of the population rather than those programmes of prescribed physical activity or special nutrition programmes that are directed to preventing specific clinical disorders such as coronary artery disease. The concept of positive mental health has been one of the major goals of many of the youth programmes such as scouting, 4H and the Y's.

However, there has been little systematic thought given to how these components of positive mental health might be developed in individuals or what kinds of programme might be devised to develop them. Ojemann (7), Bower (8) and others have established school-based programmes directed to schoolchildren, teachers and parents, but these programmes have won only limited acceptance.

A conceptual model for prevention and promotion in mental health

The field of mental health lies partly in the area of health and partly in the area of social welfare. Psychological and social factors have major influences on emotional and mental wellbeing, as well as biological factors. Thus many of the strategies for intervention for either treatment or prevention are psychological or social, as well as biological. From earlier work in manpower studies for mental health and social welfare at the Southern Regional Education Board, there has been formulated a model for conceptualizing mental health services which provides a basis for viewing prevention and promotion in mental health as part of a larger human service system. It is illustrated by the human services cube (Fig. 1). The human services cube represents all of the areas of human need - not just health and mental health. It shows how interventions in one part of the system may be expected to benefit mental health as well as the entire system.

Fig. 1. Human services cube


Physical health
Mental health
Employment
Financial Resources
Education
Family Integrity
Housing
Leisure
Community Integrity
DOMAINS OF LIVING
Temporary
Permanent
Catastrophies
Rigid Laws, Regulations, Practices
Lack of Resources
Personal Deficiencies
OBSTACLES TO FUNCTIONING
Ideal
Satisfactory
Normal
Stress
Crises
Disability
STATUS OF FUNCTIONING

Along the right side of the cube are shown the domains of living in which each person functions and has needs. These include housing, employment, health, education, economic security, a safe and secure environment, mental health, spiritual life, etc. If all went well, everyone would function normally in all of these domains of living, but this is not the case. While many people function normally, many others are in crisis or disability.

The front side of the cube shows that people operate at different levels of functioning. Many persons function in the normal range; a few seem to perform at ideal levels. Others function normally at any particular time, but they are functioning under stress or at risk of some difficulty in one or more domains of living. Still other persons are in crises of one kind or another and require help; others function at a level of temporary or permanent disability and require supportive services of various kinds.

The left side of the cube represents obstacles to functioning. One of these is deficiencies in individuals (i.e. physical or mental illness, mental retardation, ignorance) which prevent the person from functioning normally. Another is lack of resources (i.e. no jobs available, no housing, no schools). Still another is restrictive rules, regulations, policies or laws (i.e. ineligibility because of age, geographic area of residence, or income). A fourth obstacle is catastrophes and noxious agents. These are relatively rare in the case of mental health.

The objective of all of the human services is to move as many people as possible to functioning in the normal column - or into the "ideal" column, in the case of mental health promotion. Mental health treatment services have been directed to people in crisis or disability at the right side of the cube. Furthermore, they have focused almost exclusively on correcting the deficiencies in individuals through drugs, psychotherapy, etc. - one or two little cells of this entire cube. Community mental health strategies suggest that much can be done for persons in mental crises or in disability by strategies directed to other parts of the cube (i.e. improving their finances, getting them jobs, improving their environment). This is the essence of most of the social and rehabilitation programmes of community mental health. Ideally, the clinical programme for any particular individual is made up of some blend of both intrapersonal and environmental strategies.

In the case of primary prevention and promotion of positive mental health, the focus of strategies lies in the first two columns of the cube: (a) those persons who are at present functioning satisfactorily but are at risk (column 2) for preventive activities, and (b) those who are functioning satisfactorily to help them function even better (column 1) for promotion of mental health.

In both prevention and promotion there are two major strategies:

- to work with individuals to help them avoid stresses or better cope with them; and

- to change the resources, policies, or agents of the environment so that they no longer put people in stress but rather enhance their functioning.

The main differences between programmes of primary prevention and promotion of positive mental health lie in the persons at whom they are targeted. In the case of primary prevention, the target persons are those in stress or at risk, while in promotion of mental health the target is persons in situations of normal growth and development. In either case the targets and strategies must be sharply identified and directed. There will undoubtedly be many situations in which the same programme strategy will have both preventive and promotional benefits. As an example, a programme of parent effectiveness training (9) may have the effect of improving family communications and interpersonal competence of many family members (promotion), while it also may prevent some runaways and juvenile rebellion.

Programmes of primary prevention in mental health

In primary prevention, the strategies are directed towards persons in stress or at risk in one or more of the domains of living. The stress on the emotional health of individuals should be clearly identified. Too often preventive programmes have been undertaken with only the vaguest notion of how a risk or stress element related to mental health. This connection may be difficult to establish because there are often multiple factors that impinge on any particular emotional disorder and the impacts are often remote, as in the case of early childhood stresses that show up in neuroses in adulthood.

Programmes of primary prevention do not require total elimination of the risks, nor do they depend on knowing the entire etiology of a condition. It is quite possible to simply reduce the risks substantially and to do this through strategies that are strongly and clearly related to the risks. In prevention it is not necessary to know specific causes, but only to know that strong relationships exist between certain risks and the conditions.

It is generally easier to identify risks and persons at risk in a relatively small or closed social system than it is in the society at large. For example, it may be easier to identify the specific stresses and risks in a single nursing home, or in a school or in a business than in the community as a whole. Much of the problem of credibility regarding prevention in mental health is the result of attempts to become global in the choice of targets. However, whether one is working with a relatively closed social system or with the community at large, the persons at risk and the related strategies must be clearly identified.

In the case of mental health, the concern should be with the prevention of all kinds of emotional and mental disorders and emotional maladjustment as well as with the major mental illnesses. While the natural history and causes of many of the major psychoses are not clear, the processes are clear whereby certain stresses lead to anxiety and emotional maladjustments of various kinds, and these can provide the basis for preventive work. To some persons this may seem like meddling in the normal problems of living, but if these distresses have clearly antecedent causes and relationships, they are valid targets for preventive work in mental health.

Some persons argue that it is not the business of mental health professionals to be concerned with the other parts of the human services system, but when stresses in economic security, employment, housing, etc., lead to emotional crises, it is clear that all of the domains of living are related to mental health. It may not be the obligation of mental health to actually carry out the preventive programme in other human services fields, but mental health had better be concerned about them and offer some leadership and consultation to the other fields within the human services.

The strategies may then be planned in one of two categories.

1. Strategies directed towards helping the individuals at risk to either avoid the risk or to better cope with it.

   (a) These may be educational strategies (sometimes called anticipatory guidance) offered through pamphlets, films, meetings, television, etc. for persons at risk. These strategies are directed at the population at risk - not to the general population.

(b) They may be developmental strategies to improve the individual's ability to resist or cope with the stresses. These may include such strategies as self-help groups of parents (i.e. of children with Sudden Infant Death Syndrome), or groups of parents of children with specific disabilities such as mental retardation, to learn more about the disability and to develop their own resources to cope with their children's problems or the development of neighbourhood and community action groups.

(c) These may be consultation and supportive interventions at the times of crises in individuals' lives (i.e. at times of physical illness, retirement or layoffs from employment, deaths of family members, etc.). This approach is especially documented by Caplan (10).

2. Strategies directed to the environment.

(a) Reduce the restrictions in rules, regulations, policies and practices. Some examples of restrictions that are known to lead to anxiety and depression are compulsory retirement at age 65 years, company policies against hiring new employees over age 40 years, and restrictions against hiring the handicapped.

(b) Increase the resources so that people can better meet their needs. Examples are: developing an activity programme for a nursing home, and creating homemaker services in order to keep families together when one parent is hospitalized.

(c) Remove noxious agents that put people at risk. Examples are: reducing noise levels in factories, removing lead-based paint from home use, and reducing traffic congestion and hazards.

In any of these environmentally-oriented strategies, the specific programme activities such as consultation, community organization, advocacy, or community action will depend on what is determined to be the risk and the agency or mechanism through which the changes can best be made.

In general, those preventive strategies that require the least personal expense and inconvenience are likely to be the most successful for the largest number of people. Thus, putting fluorides in the drinking-water of a community is likely to be more effective for preventing dental caries for all of the children of the community than requiring all children to come to a dentist for a yearly application of fluorides to their teeth. This is also true in mental health. The simple strategies directed to the environment are more likely to be widely effective than those directed to individuals which require considerable commitment of their time and effort. For example, a strategy of making the streets one way to reduce traffic congestion will be more successful than one that requires all motorists to take a course in defensive driving.

Programmes for promotion of positive mental health

In promotion of positive mental health, the strategies are directed to persons in situations of normal growth and development (normal families, schools, churches, industry) rather than to those persons known to be at risk. However, here too the target persons and the strategies should be clearly identified and planned. They are not directed indiscriminately at the population in general, although the targets may be larger and more diffuse than in prevention. In promotion, as in prevention, the strategies may call for programmes in any domain of living in order to improve the functioning of people. Better physical health, improved housing, more jobs, better schools, and increased economic security may have far greater impact on the mental functioning of the people than specific psycho-educational strategies directed to individuals. It may not be the responsibility of the mental health programme to conduct programmes in these areas, but the mental health programme will do well to provide the leadership and assistance to other programmes in the human services when they are clearly related to mental health functioning.

A common difficulty experienced by many mental health promotion programmes, as well as some prevention programmes, is that the strategies have been too loosely related to mental health. It is not sufficient to conclude, for example, that merely putting a swimming pool in a ghetto area will be sufficient to improve the mental health functioning of the people. The rationale must be more clearly drawn so that the directness of effects is more apparent.

Promotion efforts have also suffered from trying to be too global. Here, also, it is easier to work with closed social systems than with entire communities or society at large. In closed systems, such as a single school, business or agency, it is easier to know the values, policies, and personalities and to bring about changes that will have more specific impacts.

As in primary prevention, the strategies may be directed to individuals or to the environment.

1. Strategies directed to improving the ability of people to deal more effectively with everyday life - to be more productive, more tolerant, more flexible, etc.

   (a) These may be educational strategies (anticipatory guidance) in the form of pamphlets such as "Pierre the pelican" (11) which is a series of pamphlets directed to the parents of all first-born babies offering guidance on the emotional aspects of infant care, or other efforts through the media, meetings, etc.

   (b) They may be developmental strategies to help people improve themselves by actually experiencing greater self-actualization, creativity, mastery, etc. Many of the youth programmes (Boy Scouts, Girl Scouts, the YMCA and YWCA) have these objectives. Community action groups and senior citizen clubs also have these objectives.

2. Strategies directed to the environment. These may be programme strategies.

   (a) Increase resources (i.e. better housing, a more aesthetic environment, a new local industry with better job opportunities).

   (b) Change rules, regulations, policies, so that programmes serve more people, and improve their functioning (i.e. recreation centres, playgrounds, etc. open for longer hours).

As in the case of prevention, those strategies that involve the least personal expense or inconvenience are the ones that will be most effective for the largest number of people. However, programmes directed to a few individuals may be quite effective and appropriate for those few individuals who are motivated to participate. An example is parent effectiveness training, which may be very helpful for those parents who are committed to participating in such programmes, but parent effectiveness training programmes can hardly expect to reach large numbers of the total population of parents. These issues must be carefully thought out when setting priorities for mental health promotional activities.

Who will do prevention and promotion in mental health?

There has been little thought given to who will do mental health prevention and promotion. At this time, none of the mental health professions provides any amount of systematic training for prevention and promotion. In addition, there is the problem that most of the mental health professionals are naturally rather conservative about trying new things and reticent about moving out of areas that they have considered to be their turf. Many mental health professionals do not feel comfortable in relating to persons from other fields, such as education, corrections, politics, public administration, etc., where much of the preventive and promotional work will be done.

There is a tendency in some mental health agencies to employ an educator (a health educator or an adult educator) on the assumption that prevention and promotion are educational endeavours (anticipatory guidance). However, it is clear that only some of the strategies of mental health prevention and promotion are educational, and that these tend to be the least effective strategies for widespread results.

It is apparent that whoever will be responsible for prevention and promotion programmes in state or local mental health agencies will need some continuing education about the whole matter - assessing needs, setting objectives, developing and implementing programmes, and evaluating them.

It seems reasonable to assign the primary responsibility for prevention and promotional programmes to a single person or a small group of staff who can then develop expertise in these concepts and can serve as consultants and leaders for other staff members who wish to become involved. They may also serve as consultants to other human service agencies.

REFERENCES

1. Gladston, I., ed. Beyond the germ theory: the roles of deprivation and stress in health and disease. New York, Health Education Council, 1954.
2. Eisdorfer, C. Handbook of community mental health. New York, Appleton-Century-Crofts, 1972.
3. Bloom, B.L. Strategies for the prevention of mental disorder. In: Issues in community psychology and preventive mental health. New York, Behavioral Publications, 1971.
4. Jahoda, M. Current concepts of positive mental health. New York, Basic Books, 1958.

5. Ringness, T.A. Mental health in the schools. New York, Random House, 1968.
6. Sanford, N. Is the concept of prevention necessary or useful? In: Eisdorfer, C. & Golann, S., ed. Handbook of community mental health. New York, Appleton-Century-Crofts, 1972.
7. Ojemann, R.H. Investigations on the effects of teaching an understanding and appreciation of behavior dynamics. In: Caplan, G., ed. Prevention of mental disorders in children. New York, Basic Books, 1961.
8. Bower, E.M. Primary prevention in a school setting. In: Caplan, G., ed. Prevention of mental disorders in children. New York, Basic Books, 1961.
9. Gordon, T. Parent effectiveness training. New York, P.H. Wyden, 1970.
10. Caplan, G., ed. Prevention of mental disorders in children. New York, Basic Books, 1961.
11. Rowland, L.W. Pierre the pelican: a program of parent education in principles of mental health for parents of first-born children. New Orleans, LA, Louisiana Association for Mental Health, 1957.

THE CONCEPT OF HEALTH PROMOTION AND THE PREVENTION OF ADOLESCENT DRUG ABUSE[*]

by
Cheryl L. Perry and Richard Jessor

Drug abuse among adolescents has become a major health concern in American society. The relation of drug abuse to motor vehicle mortality and morbidity, to long-term chronic diseases, and to other risk-related behaviours such as precocious or unprotected sexual intercourse is now generally recognized. With earlier onset, wider prevalence, and heavier use of drugs by young people (especially tobacco, alcohol, and marijuana), has come broader interest in the possibilities for intervention. Over the past decade, interest has also grown in the concept of health promotion. The linkages that unite these two interests, the prevention of drug abuse and the promotion of health, are the key concerns of this article.

The major aim of the article is to help clarify the meaning of health promotion as an intervention modality. The sketching out of a conceptual framework from which to view health promotion makes it possible to examine its aims, its structure, and its approach in a more logical fashion. A large-scale health promotion programme that has included drug abuse prevention as one of its components is then reviewed from the perspective of that conceptual framework.

Towards a conceptual framework for health promotion

It seems necessary, first, to provide some conceptual clarification of both the notion of "health" and of "health promotion". The two terms are generally used without explicit definition and with an assumption that there is broad consensus on their meanings. Clearly, that is not the case. Each concept carries a wide range of meanings with differing personal, social, philosophical, and even political significance.

The concept of health

With respect to the concept of health, most earlier definitions followed a medical orientation and tended to emphasize variation in illness. Historically, health had been defined as a residual category, i.e. as the absence of disease. Later definitions, such as that of the World Health Organization, have a more positive character: health is a "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (1). Other definitions have been somewhat more analytical, emphasizing effective social functioning, adequate role or task performance, realistic personal aspirations, the ability to cope and adapt, or simply extended longevity (2).

---

[*] This article was published in Health education quarterly, 12(2): 169-184 (1985).

What has been missing in even the recent literature, however, is a concept of positive health, i.e. health beyond either the absence of disease or the mere adequacy of personal and social functioning. Consideration of such a notion clearly transcends the traditional concerns of medicine with preserving or restoring health. As Veatch (3) has noted, "... the problem of improving someone's health beyond the minimal standard to approach the ideal is only with difficulty assimilated to the medical model"; and the traditional orientation "... often makes one lose sight completely of the possibility of an option to improve health beyond the normal".

The notion of positive health has been more readily explored by those in the social and behavioural sciences. Usually invoked in that literature are components and dimensions referring to a sense of fitness and wellbeing, feelings of confidence and competence, a social commitment and contribution to the betterment of others, and the realization and fulfilment of individual potentiality. Some degree of integration of these various components into an organized way of life is also usually stressed. Salk (4) has summed this up with the phrase "... an active condition of being", and Whitbeck (5) notes that "The notion of health ... is closely connected with the idea of wholeness. ... health, in the positive sense, connotes wholeness of a person".

The importance of efforts to conceptualize positive health becomes apparent in two ways. First, such efforts make clear that, in a philosophical sense, health is a different kind of concept than that of disease, one that includes nonbiological considerations, that implicates possibility as well as actuality, and that transcends the perimeter of the individual to include linkages with the larger social environment, with culture, and with history. Second, without such efforts the idea of health promotion would necessarily be limited only to those whose physical health is at risk, instead of encompassing the larger population whose health, though already adequate, can nevertheless be enhanced. Unfortunately, as Anderson (6) concludes in his penetrating review, there is as yet no clear concept of positive health and, without consensus on its content and meaning, it tends to remain a rather elusive idea.

The concept of health promotion

The concept of health promotion has been even less fully explored than that of health and is equally elusive. In practice, its usage overlaps considerably with the notion of disease prevention, largely reflecting, again, a view of health as the absence of disease. Health promotion is generally associated with changing particular health practices or health-related behaviours. In Healthy people (7), for example, the concept of health promotion is used in relation to cessation of smoking, reduction of alcohol and drug use, control of stress, modification of unhealthy diet, and increase of exercise. Such a listing, stressing behavioural deletions for the most part, is quite characteristic of most definitions of health promotion. Something similar appears in the Canadian Lalonde report (8) and is also evidenced in the well known list of health practices suggested by Belloc & Breslow (9).

Although an orientation towards disease prevention is not antithetical to health promotion, neither their objectives nor the activities they include can be treated as similar. The focus of the former is on those who are at risk, whereas the focus of the latter is on the population as a whole. Further, the former is concerned with conserving health, while the latter is concerned with enhancing health. Finally, the former seeks to maintain the status quo with respect to health; by contrast the latter fosters a departure from the status quo towards an ideal state of health as yet unattained. The specification of that ideal is bound up, of course, in the notion of positive health mentioned earlier.

The distinction between disease prevention and health promotion is increasingly recognized and, in recent publications, the concept of health promotion has been elaborated to be more positive and more broadly inclusive (10-14). These definitions make it clear that health promotion is concerned with more than the reduction or deletion of specific, health-compromising behaviours. It may, in fact, involve a variety of methods to instigate the adoption of alternative, health-enhancing behaviour. And, especially important, it includes environmental changes that would support such adoption, as well as changes that would limit opportunity to learn or engage in activities that can compromise health.

The four domains of health

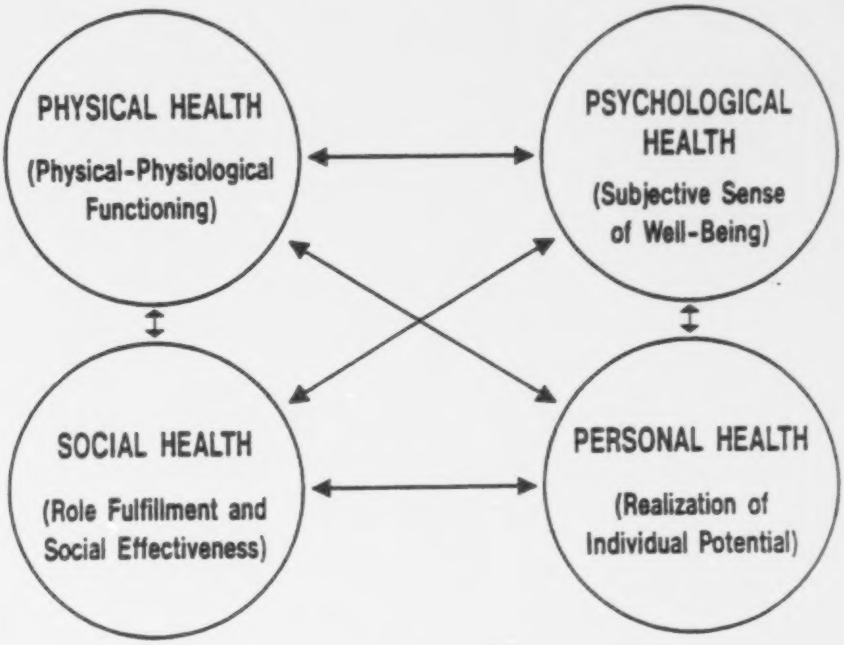
In the light of these considerations, it seems useful to think of the concept of health as encompassing at least four different but interrelated domains: physical health, psychological health, social health, and finally what we have termed personal health. These domains and their relationships are shown in Fig. 1.

Physical health refers to processes of physical and physiological functioning and their adequacy and efficiency. This is the domain of traditional concern to medicine. A state of at least minimal health in this domain would refer to adequate functioning of the major body systems, with objective indicators such as blood pressure, cholesterol measures, resting heart rate, carbon monoxide level, etc., being in the normal range. In terms of physical health parameters, the ordinary tasks and requirements of everyday life are capable of being accomplished.

Psychological health refers primarily to a subjective domain, a domain of self-appraisal of how one generally feels, one's sense of wellbeing. Although often a reflection of the state of physical health, it is by no means simply a mirror of physical health and clearly both domains can vary independently. Psychological health involves such areas as the sense of fitness and energy, feelings of wellbeing, a self-concept of personal competence, and belief in an internal locus of control. A state of at least minimal psychological health would refer to the perception of self as adequate to meet the expectations of self and others, having the energy to do so, and feeling satisfied as far as wellbeing is concerned.

The third domain of health, social health, refers to a person's social effectiveness, the adequacy with which the individual fulfils tasks, performs roles, and acquires the necessary skills for adaptive functioning within the social setting. Social life is structured and organized around expectations

Fig. 1. Domains of adolescent health


PHYSICAL HEALTH
(Physical-Physiological Functioning)
PSYCHOLOGICAL HEALTH
(Subjective Sense of Well-Being)
SOCIAL HEALTH
(Role Fulfillment and Social Effectiveness)
PERSONAL HEALTH
(Realization of Individual Potential)

and standards that must be met if interpersonal, institutional, and societal processes are to function smoothly. Having the repertoire of skills and being effective in employing them to attain socially expected levels of performance is central to the notion of social health. At least minimal health in the social domain would be employing the appropriate skills and carrying out adequately the basic tasks required by occupancy of major life roles.

The final domain is that of personal health. By personal health we mean something that goes beyond adequate or effective functioning in the other three domains. By referring health to the person, i.e. to the individual as an integrated whole, we want to emphasize the possibility of inner capabilities, resources, and talents that may not be tapped or elicited by the ordinary circumstances, demands, and opportunities of everyday life. A concern with personal health implies that, within an individual, there is unrealized potential for fulfilment along various dimensions, including ones that are not necessarily instrumental, and that their stimulation and actualization would permit the full development of what a person can become. The objective described by the Director-General of the World Health Organization for its "Health for all by the year 2000" campaign, namely, a level of health that permits individuals "... to realize whatever latent intellectual, cultural and spiritual talents they have" is apposite to this discussion of the meaning of personal health (15). At least minimal personal health might refer to an enduring interest in activities and experiences that enable the person to transcend preoccupation with the tasks and obligations of daily living.

The relevance of including these multiple domains in any definition of health becomes obvious when considering drug abuse as behaviour that is health-compromising for adolescents.[a] If only physical parameters are used, then concern about the health-compromising consequences of drug abuse would be limited primarily to drug-related accidents and injuries and, in the long term, to chronic disorders and morbidity. But this would exclude from consideration the potential consequences that drug abuse may have for compromising health in the other three domains as well. The abuse of drugs could well lead to feelings of dependency, external control, and apathy in the psychological domain, to poor role performance, for example in school, in the social domain, and to a lessened involvement in activities in which particular interests and talents can be explored in the personal domain. These potential health compromising outcomes of drug abuse are illustrated in Fig. 2.

In the preceding description of the four health domains, an effort was made to anchor each domain with a specification of a minimal state of health. That emphasis upon a minimal state of health was intended as a way of illuminating further the distinctive orientation of health promotion and of highlighting the contrast with a disease prevention orientation. Minimal or adequate health constitutes the conceptual dividing line between health and illness or disease, less-than-minimal health implying ill health. Disease prevention is focused upon that dividing line and on forestalling changes that may shift health status from minimal to less than minimal. But the concept of minimal implies, as well, a range of possible health statuses in a direction away from the dividing line and towards maximal or ideal health. Health promotion has its focus upon enhancing health status in the direction towards such an ideal. Although, as noted earlier in regard to positive health, ideal health is difficult to specify concretely, nevertheless it is much less difficult and entirely feasible to identify health statuses that are at least beyond the minimal level and to establish them as objectives.

In the light of our multi-component definition of health, health promotion should now be seen as the implementation of efforts to foster improved health and wellbeing in all four domains of health.

The two complementary strategies for health promotion

Efforts to promote health can be divided into two main strategies: those that are oriented towards weakening, reducing, and eliminating behaviours that compromise health; and those that are oriented towards introducing, strengthening, and reinforcing behaviours that enhance health. The latter may turn out, incidentally, to be incompatible with engaging in health-compromising behaviour. Recognition of both of these strategies for health promotion, and of their complementarity, makes it clear that the enhancement

---

[a] Our use of the term "drug abuse" refers to that level of drug use (either frequency or intensity or both) that impairs functioning in at least one of the health domains. At the same time, it is important to recognize that more moderate levels of drug use may not compromise the health of the user and, in some instances, could conceivably be health-enhancing. In this regard, the prevention panel's statement in the Institute of Medicine report on alcohol problems is relevant: "Alcohol, when used in appropriate amounts in appropriate ways, is at least benign and may even have beneficial effects" (16).

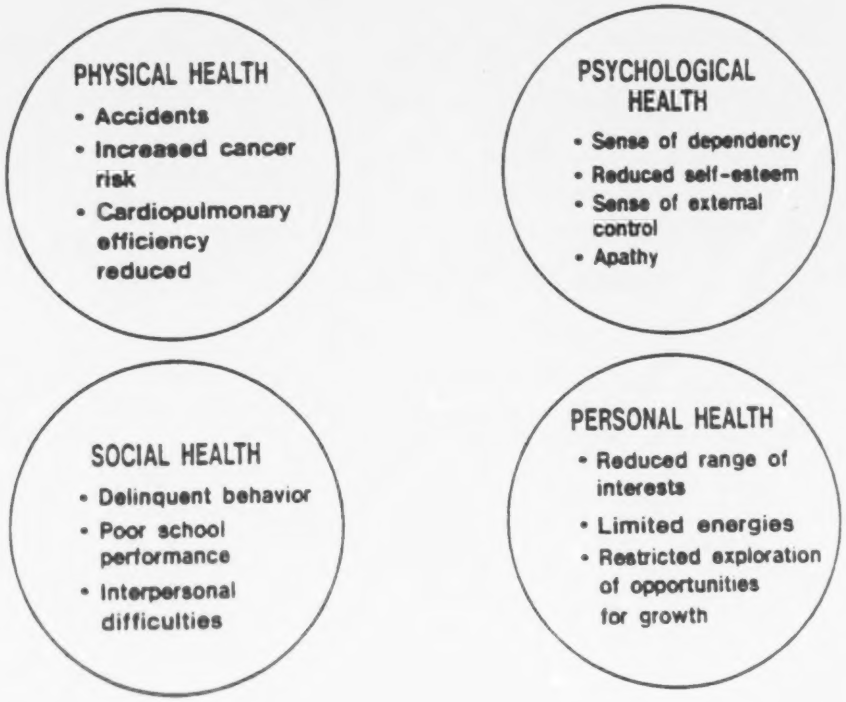
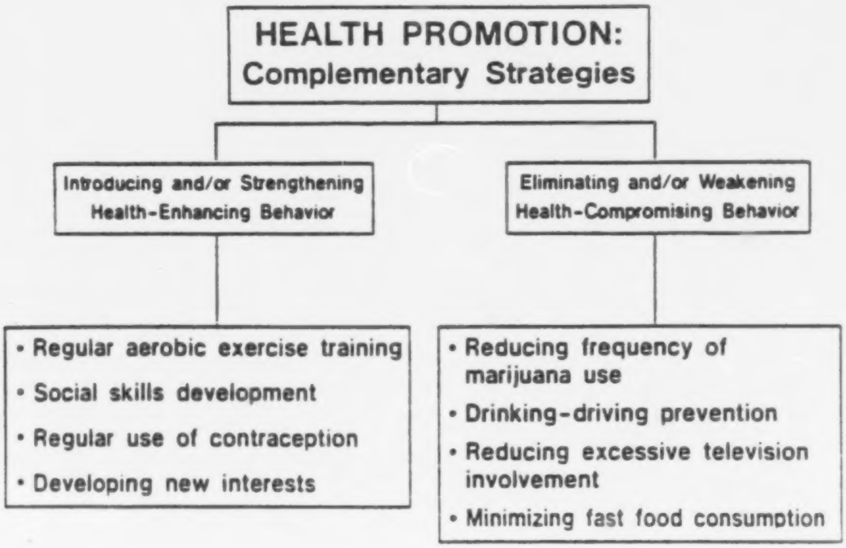

PHYSICAL HEALTH
• Accidents
• Increased cancer risk
• Cardiopulmonary efficiency reduced
PSYCHOLOGICAL HEALTH
• Sense of dependency
• Reduced self-esteem
• Sense of external control
• Apathy
SOCIAL HEALTH
• Delinquent behavior
• Poor school performance
• Interpersonal difficulties
PERSONAL HEALTH
• Reduced range of interests
• Limited energies
• Restricted exploration of opportunities for growth

Fig. 2. Adolescent drug abuse as health-compromising behaviour

of health cannot be seen simply as a residual outcome of reducing health-compromising behaviour. Alternatively, it cannot be seen as restricted only to direct efforts to advance health while ignoring the necessity of reducing health-compromising behaviour at the same time. An approach to health promotion that is comprehensive should represent an optimal balance of attention to both strategies: strengthening health-enhancing behaviour and, simultaneously, reducing health-compromising behaviour. Both strategies are illustrated in Fig. 3.

Discussion of health-compromising and health-enhancing categories of behaviour makes it important to understand the relations *among* the behaviours in each category and *between* the two categories. It is already clear that there is covariation among at least some subset of health-compromising behaviours, e.g. drug and alcohol abuse, smoking, precocious sexuality, and delinquency, and that they may constitute a behavioural syndrome (17). Evidence for similar covariation among health-enhancing behaviours has not been systematically pursued and is, at this point, slim. Finally, the possibility of an inverse relationship between health-enhancing and health-compromising behaviour, while logical and psychologically important, is essentially without empirical support at this time. Yet these possible patterns of relationship among the variety of health-related behaviours have enormous significance for the kind of complementary approach to health promotion emphasized here. This is clearly an area that warrants immediate and extensive research attention. Irrespective of the ultimate findings about covariation within and between these two categories, however, health promotion, as an approach, needs to be seen as logically encompassing *both* of the strategies described.

Fig. 3. Health promotion: complementary strategies


HEALTH PROMOTION:
Complementary Strategies
Introducing and/or Strengthening Health-Enhancing Behavior
Eliminating and/or Weakening Health-Compromising Behavior
• Regular aerobic exercise training
• Social skills development
• Regular use of contraception
• Developing new interests
• Reducing frequency of marijuana use
• Drinking-driving prevention
• Reducing excessive television involvement
• Minimizing fast food consumption

The three foci of intervention

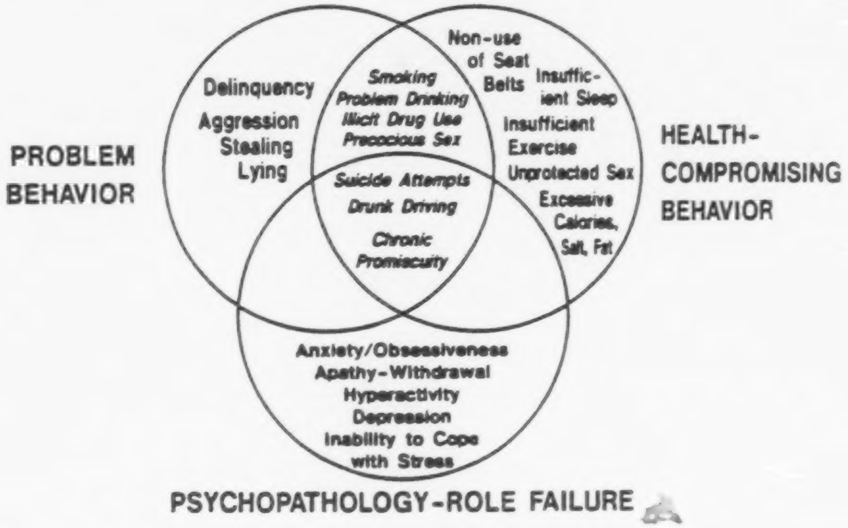
Given commitment to both strategies, the next issue is just how to implement them, i.e. how to intervene to strengthen health-enhancing and, at the same time, to diminish health-compromising behaviour. In short, the general question being asked is how to achieve change in social behaviour, especially when health-compromising behaviour such as drug abuse is the focal concern.

Answering that question requires recourse to theory about the kinds of factors that are related to and can influence the occurrence of behaviour. In the last decade or two, several theoretical formulations have been developed that are relevant to a concern with health-related behaviour and with behavioural change. Although our perspective is most directly influenced by one of those, namely problem-behaviour theory (18,19), it is a perspective that is more or less shared by a number of different social-psychological approaches (20,21). What is common to them is an interest in three major levels of analysis - the level of behaviour, the level of personality, and the level of environment - and an awareness that efforts to change behaviour can be focused at any one or at all of those levels.

The possibility that problem-behaviour theory, developed to account for variation in adolescent problem behaviour, can be apposite to the domain of health-compromising behaviour as well, derives from a consideration of the overlap that exists between these two categories. As can be seen in Fig. 4, there is a substantial intersection between the two realms. That intersection includes a number of behaviours that have been dealt with in the past by problem-behaviour theory (e.g. problem drinking, smoking, precocious sex) and that are now of concern because they can be seen simultaneously to be health-compromising. In order to exhaust the rubric of adolescent health-related behaviour, we have also shown a third domain in Fig. 4, the domain of psychopathological behaviour and social role failure. Some of the adolescent behaviours associated with this latter domain lie at an intersection with both of the other domains and are clearly also health-compromising.

Health-related interventions at the level of behaviour would focus on weakening or eliminating particular health-compromising behaviours. Smoking cessation programmes with their attention to the number of cigarettes smoked, pattern of use, and context of use, and alcohol moderation campaigns seeking a reduction in intake exemplify such efforts. They focus directly on the behaviour of concern and on how to change it.

Fig. 4. Behavioural domains relevant to adolescent health promotion


PROBLEM BEHAVIOR
Delinquency
Aggression
Stealing
Lying
Smoking
Problem Drinking
Illicit Drug Use
Precocious Sex
Non-use of Seat Belts
Insufficient Sleep
Insufficient Exercise
Unprotected Sex
Excessive Calories, Salt, Fat
HEALTH-COMPROMISING BEHAVIOR
Suicide Attempts
Drunk Driving
Chronic Promiscuity
Anxiety/Obsessiveness
Apathy-Withdrawal
Hyperactivity
Depression
Inability to Cope with Stress
PSYCHOPATHOLOGY-ROLE FAILURE

Still at the level of behaviour, interventions might also focus on introducing or strengthening other behaviours that can serve as substitutes for or alternatives to the behaviours of concern, and that may also be incompatible with drug use. Running is an example that may be incompatible with smoking; engaging in new hobbies or social activities can fulfil psychological functions similar to those of drinking and drug use, e.g. serving as a basis for peer solidarity.

Health-related interventions at the level of personality would focus on reducing the strength of particular personality dispositions, for example, risk-taking orientation, tolerance of deviance, or sensation-seeking tendencies, that may sustain health-compromising behaviours such as drug use.

Still at the level of personality, health-related interventions might also focus on introducing or strengthening other personality dispositions that could increase the likelihood of health-enhancing behaviour, such as increasing personal value on health and fitness, strengthening internal locus of control about health, or teaching the importance of a sense of social responsibility.

Since the level of personality is least often considered as a focus of intervention, it may be useful to provide additional emphasis for doing so. Reluctance to engage personality attributes in the change process may reflect the view that personality is refractory to change, or that it is difficult to measure and evaluate, or even that such a focus raises value and ethical considerations not germane to the other two foci. These views notwithstanding, it is abundantly clear that personality factors are strongly involved in the entire domain of health-related behaviour. Recent research ranging across such diverse personality concepts as the sense of internal control (22), hardiness (23,24), social conformity/conventionality (25), and even religiosity (26,27) has shown their significant linkages to variation in health and illness. Other personality concepts such as value on health and fitness, self-esteem, or "Type A" are also clearly relevant. That changes in personality attributes can be achieved and are within the reach of targeted interventions ought not to be ruled out a priori. Beyond the available research literature on changing values, attitudes, beliefs, needs, or expectations, there are several intervention programmes (28,29) already engaged in innovative curriculum efforts to do just that with adolescents. It should be emphasized that personality, as dealt with in problem-behaviour theory and other social learning theories, is a social-cognitive concept and not the deep-lying, early-established, and largely unchangeable notion that is conveyed by classical psychoanalytic theory.

At the level of the environment, health-related interventions would focus on eliminating or weakening those aspects of the environment that support or permit engagement in health-compromising behaviours, for example, access to health-compromising materials such as drugs, or exposure to influential models for health-compromising behaviour, or social support from peers or adults for engaging in such behaviour.

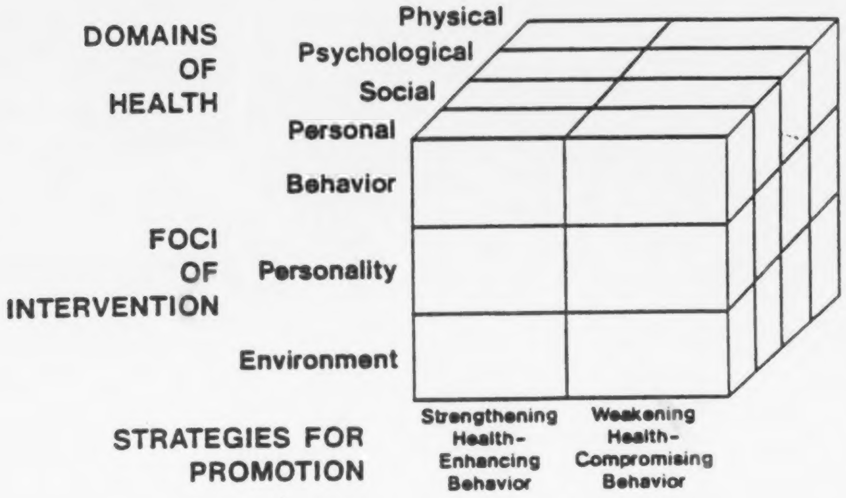
Still at the level of the environment, interventions can also focus on providing access to, or creating opportunities for, alternative health-enhancing behaviour, promoting exposure to influential models who exhibit health-enhancing behaviour, and making available consistent rewards and reinforcement for positive changes in behaviour.

A three-dimensional model of health promotion

The major emphases that we have discussed in conceptualizing health promotion can be seen as constituting three dimensions. One dimension involves the four domains of health: physical, psychological, social, and personal. The second dimension includes the two strategies for health promotion: weakening or eliminating health-compromising behaviour, and introducing or strengthening health-enhancing behaviour. And the third dimension consists of the three foci of intervention: behaviour, personality, and the environment. These various considerations generate a three-dimensional model for health promotion that we have represented as a cube in Fig. 5.

The position that emerges from the considerations in the article is that a truly comprehensive health promotion approach to drug abuse prevention would engage efforts and interventions along all three dimensions of the model.

Fig. 5. A three-dimensional model of adolescent health promotion



Application of the model to a health promotion programme

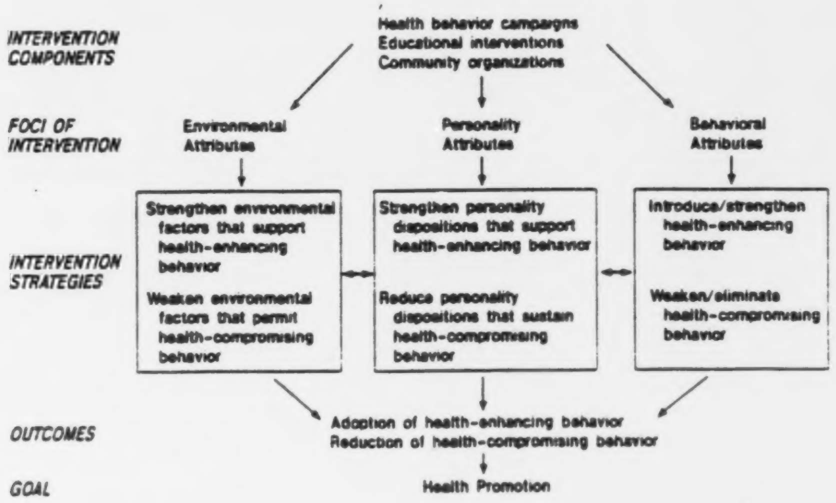
Using the health promotion framework provided by the cube, we can turn more systematically to describing a current intervention programme in health promotion and adolescent drug abuse prevention. A number of major intervention programmes are currently underway around the world. Several of them have smoking, drinking, or marijuana use by adolescents as targeted concerns and health as the intervention focus. These include the North Karelia Youth Project (30), the Minnesota Heart Health Program (31), the Stanford Heart Disease Prevention Program (32), the Oslo Youth Study (33), the International Know Your Body Program (34), and the Chicago Heart Health Curriculum Project (35). Because the first author is responsible for youth education for the Minnesota Heart Health Program, we will restrict discussion here to a description of that programme alone. Our aim is to clarify the linkages that are possible between the preceding theoretical framework and the design and implementation of a particular health promotion programme.

The Minnesota Heart Health Program

The Minnesota Heart Health Program is a community-based demonstration project to enhance cardiovascular health and to reduce morbidity and mortality from cardiovascular diseases - heart attack and stroke - in three northern midwestern communities. The targeted objectives are to achieve significant change in smoking prevalence, eating patterns, physical activity levels, and hypertension management (31). Three types of intervention component are used: communitywide health campaigns to influence health-related behaviour; educational interventions to teach health-related skills; and community organization programmes to provide local support for community change.

In the design of interventions for youth, the first consideration was the different foci of intervention - environment, personality, and behaviour - and the theoretical attributes inherent in each. At each level, attention was given both to strengthening those characteristics that would support health-enhancing behaviour and to weakening those that support health-compromising behaviour. The aim was to maximize the impact of the intervention in terms of behaviour change. This effort is schematically presented in Fig. 6.

Fig. 6. The Minnesota Heart Health Program: youth education

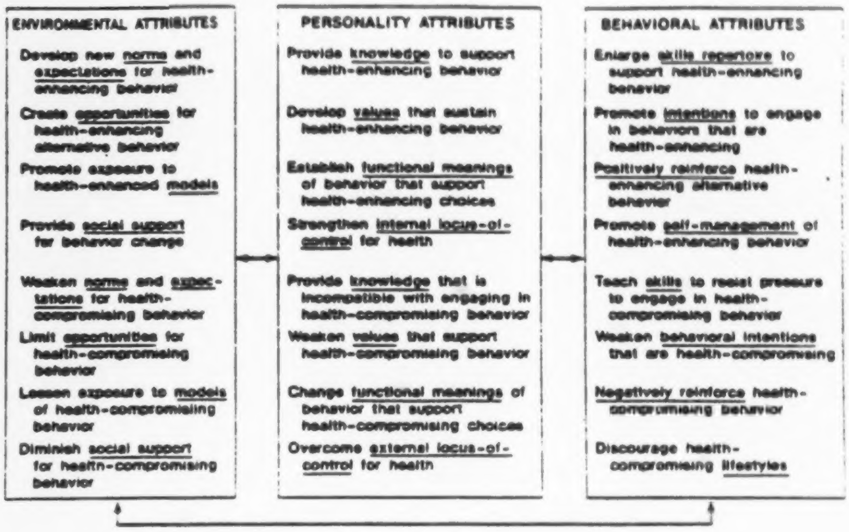

INTERVENTION COMPONENTS
Health behavior campaigns
Educational interventions
Community organizations
FOCI OF INTERVENTION
Environmental Attributes
Personality Attributes
Behavioral Attributes
INTERVENTION STRATEGIES
Strengthen environmental factors that support health-enhancing behavior
Weaken environmental factors that permit health-compromising behavior
Strengthen personality dispositions that support health-enhancing behavior
Reduce personality dispositions that sustain health-compromising behavior
Introduce/strengthen health-enhancing behavior
Weaken/eliminate health-compromising behavior
OUTCOMES
Adoption of health-enhancing behavior
Reduction of health-compromising behavior
GOAL
Health Promotion

The next consideration in intervention design required delineation and specification of the theoretical attributes that were the most relevant aspects of the environment, personality, and behaviour of children and adolescents and that were most feasible for intervention. The theoretical attributes selected were largely drawn from previous research with adolescents (18), but were also based on needs assessments carried out in each community. Fig. 7 provides examples of a subset of these attributes for each focus of intervention.

At the level of the environment, norms and expectations for health-related behaviour were targeted for change. A specific attempt was made in programme construction to develop or strengthen norms and expectations that would support health-enhancing behaviour and to weaken norms and expectations that support health-compromising behaviour. Other theoretical attributes given attention at the level of the environment included opportunities, barriers, social support, and models for health-related behaviour within each community.

At the level of personality, the functional meanings of smoking and drug use to adolescents were a primary focus. Strategies to change the functional meanings of those behaviours were designed, e.g. from their being seen as ways to appear more adult to seeing them as barriers to personal autonomy. Such strategies serve to support health-enhancing choices and to diminish those that are health-compromising. Other theoretical attributes of programme concern at the level of personality included values, expectations, locus of control, and knowledge regarding health-related behaviour.

Fig. 7. Theoretical attributes at each focus of intervention


ENVIRONMENTAL ATTRIBUTES
Develop new norms and expectations for health-enhancing behavior
Create opportunities for health-enhancing alternative behavior
Promote exposure to health-enhanced models
Provide social support for behavior change
Weaken norms and expectations for health-compromising behavior
Limit opportunities for health-compromising behavior
Lessen exposure to models of health-compromising behavior
Diminish social support for health-compromising behavior
PERSONALITY ATTRIBUTES
Provide knowledge to support health-enhancing behavior
Develop values that sustain health-enhancing behavior
Establish functional meanings of behavior that support health-enhancing choices
Strengthen internal locus-of-control for health
Provide knowledge that is incompatible with engaging in health-compromising behavior
Weaken values that support health-compromising behavior
Change functional meanings of behavior that support health-compromising choices
Overcome external locus-of-control for health
BEHAVIORAL ATTRIBUTES
Enlarge skills repertoire to support health-enhancing behavior
Promote intentions to engage in behaviors that are health-enhancing
Positively reinforce health-enhancing alternative behavior
Promote self-management of health-enhancing behavior
Teach skills to resist pressure to engage in health-compromising behavior
Weaken behavioral intentions that are health-compromising
Negatively reinforce health-compromising behavior
Discourage health-compromising lifestyles

At the level of behaviour, the main focus was on the skills repertoire of children and adolescents in relation to smoking and drug use. Programmes were designed to teach students health-enhancing skills such as time management, as well as skills that should diminish involvement with drugs, e.g. how to resist peer pressure. Other theoretical attributes of programmatic interest at the level of behaviour included self-management skills, behavioural intentions, trial behaviour, and reinforcement for actual behaviour change.

Components of the intervention programme

The intervention programmes were designed either as health behaviour campaigns, educational interventions, or community organization activities.

Health behaviour campaigns seek to focus the community's attention on a specific behaviour for a two- to three-month intensive period. Four campaigns, around smoking, eating, physical activity, and blood pressure management, are conducted each year in each community. A recent campaign around smoking was the communitywide Quit and Win Contest (36) which encouraged smokers to quit and "win" by providing a drawing for a prize (a trip for four to Disney World funded by the local community) to contestants who quit smoking and remained nonsmokers throughout a month-long period. At the level of the environment, the contest not only created communitywide support for attempts to quit, but also, by including family members in the prize, provided family support and encouragement to change; the contest also publicly substituted quitter models in the community for smoking models. At the level of personality, the contest publicity sought to change attitudes favourable to smoking, promoted the "identity" of being a nonsmoker, and provided knowledge, via brochures, on the benefits of nonsmoking. At the level of behaviour, the contest encouraged intentions to quit, promoted self-management of smoking desires and quitting on one's own, provided self-help books on skills needed to Quit and Win, and directly reinforced quitting by telephone calls congratulating quitters as well as by publishing their names in the local newspapers.

Educational interventions, the second component, tend for the most part to be school-based, skills training, behaviour-change programmes. Keep it Clean is a smoking and drug abuse prevention programme aimed at junior high school students. The six-hour programme is taught by same-age peer leaders and is facilitated by the classroom teachers. It focuses on skills to resist influences to begin to smoke and to experiment with drugs (37). At the level of the environment, Keep it Clean seeks to change normative expectations by explicitly teaching that smoking and drug use are behaviours that only a minority of peers are engaged in. The training and reinforcement of elected peer leaders, selected as people who are admired and respected by their classmates, clearly promotes and provides exposure to positive nonsmoking models. At the level of personality, Keep it Clean seeks to change incorrect normative beliefs about the prevalence of smokers among peers, to change attitudes about the acceptability of smoking behaviour, and to provide knowledge about the social and physiological consequences of smoking and drug abuse through small group discussions and videotaped simulations. At the level of behaviour, Keep it Clean provides skills training in how to say "no" to peers and in how to scrutinize tobacco advertising; it reinforces personal intentions to remain a nonsmoker by eliciting public statements of commitment in the classroom; and it also reinforces alternative behaviour to drug use through role playing presentations by the students.

The third intervention component, community organization, seeks changes in the social organization and the social networks within the community or its institutions in order to provide ongoing incentives, opportunities, and support for engaging in health-enhancing behaviour. Students in the elementary and junior high schools, for example, are selected as representatives to a student health council. They then serve as liaisons between the Heart Health Program staff and their constituency. They are also trained as peer leaders, and are encouraged to initiate their own projects, such as putting out a health newspaper or organizing cross-age teaching. At the level of the environment, the student health council promotes exposure to visible models for health-enhancing behaviour and encourages direct reinforcement by the representatives for attempts at behaviour change. At the level of personality, the student health council provides knowledge to students that is credible and understandable since it comes from people their own age. It also serves to strengthen students' values on health and fitness through their participation in and awareness of the various communitywide health-related activities. At the level of behaviour, the health council representatives serve as instigators of alternative health-related activities, such as participation in regular physical exercise; and they encourage self-management and personal initiation of behaviour change efforts.

The expected outcome of the variety of youth education activities designed to effect these environmental, behavioural, and personality level changes is the adoption of health-enhancing behaviours such as healthy eating, regular physical activity, sufficient sleep, and seatbelt use, and the reduction or cessation of certain health-compromising behaviours such as tobacco smoking, excessive drinking, marijuana use, and salt and fat consumption. Since the project is still at an early stage, empirical findings are only now beginning to emerge, and no evaluation of its success can be made at this time.

Conclusions

The concept of health promotion that emerges from this exegesis is complex, differentiated, and logically linked to psychosocial theory about the determinants of behaviour and the processes of behaviour change. Far removed from a medical model of health, the notion of health promotion has been shaped much more directly by considerations from behavioural science. The perspective of the latter suggests a concept of health that can be grasped only partially by physical and physiological parameters alone; what is required, in addition, is reference to subjective experience and self-appraisal, to socially defined role performance and adaptation, to the degree of fulfilment of individual potential for self-development, and to the integration of these four domains within the person.

Deriving also from behavioural science are logical implications for the promotion of health when it is defined in this way. Three such implications have been relied upon in the approach we have described: first, that health promotion ultimately entails behaviour change; second, that behaviour can be changed by introducing and reinforcing new, and often alternative, behaviours that enhance health, and by negatively reinforcing or damping behaviours that compromise health; and third, that specific behaviours can be affected by changing the environment, by changing personality, and/or by changing other behaviours.

The three-dimensional model based on these ideas indicates what a truly comprehensive approach to health promotion might be like. It would engage multiple domains of health, rely on both strategies of intervention, and target as many of the foci of intervention as possible. Comprehensiveness is obviously not always feasible and even the quest for it may seem intimidating. We would argue, nevertheless, that recognition of the possibility of comprehensiveness is itself important. It displays to those seeking to implement health promotion interventions the array of logical choices that are available - the entire armamentarium - for the allocation of limited resources, and it thereby enables decisions to be made on a theoretical basis. It also makes clear that successful interventions probably do require the synergy of comprehensive implementation rather than being based on efforts that are limited in focus and confined in scope.

We want to conclude this discussion of a model for health promotion by calling attention to its implications for a larger societal perspective. Although we have argued that health promotion must ultimately come to rest on behaviour change, we do not wish to be understood as urging only a proximal focus for intervention, one that only deals with individuals, and only with the immediate context of their lives. Nor, in calling attention to the possibility for intervention at the level of personality and, specifically, for strengthening internal locus of control over one's health, do we wish to convey the idea that health promotion is simply a matter of personal responsibility. On the contrary, the immediate context of lives and the patterning of personality are both shaped by larger and more distal social, economic, and political forces, and the general promotion of health probably faces insuperable obstacles and countervailing pressures unless that distal environment is also changed. Changes in cultural values, societal norms, and the socioeconomic structure of opportunity - for education, employment, recreation, and self-development - must be considered an essential part of any broad approach to the promotion of health. Failure to recognize the necessity for such distal and macro-environmental changes, while at the same time emphasizing personal responsibility for health, seems tantamount to "blaming the victim" (6,38,39).

Perhaps the salutary resolution of this antinomy lies in the recognition that promoting "personal responsibility for health" might well include promoting activist behaviour to change the distal environment and, thereby, ultimately to reshape one's everyday health-related life situation. Such a resolution is fully consonant with the health promotion model proposed in this paper; it is also compatible with the fundamental tenets of a democratic society committed to the health of its citizens.

REFERENCES

1. World Health Organization. Constitution of the World Health Organization. Official records of the World Health Organization, 2: 100 (1946).
2. Baranowski, T. Toward the definition of concepts of health and disease, wellness and illness. Health values, 5: 246-256 (1981).
3. Veatch, R. The medical model: its nature and problems. In: Caplan, A.L. et al., ed. Concepts of health and disease: interdisciplinary perspectives. Reading, MA, Addison-Wesley, 1981.
4. Salk, J. What do we mean by health? Journal of school health, 42: 582-585 (1972).
5. Whitbeck, C. A theory of health. In: Caplan, A.L. et al., ed. Concepts of health and disease: interdisciplinary perspectives. Reading, MA, Addison-Wesley, 1981.
6. Anderson, R. Health promotion: an overview. Copenhagen, WHO Regional Office for Europe, 1983.
7. US Department of Health, Education and Welfare. Healthy people: the Surgeon General's report on health promotion and disease prevention. Background papers. Washington, DC, US Government Printing Office, 1979 (DHEW Publication No. 79-55071A).
8. Lalonde, M. A new perspective on the health of Canadians. Ottawa, National Health and Welfare, Minister of Supply and Services Canada, 1974 (Cat. No. H31-1374).
9. Belloc, N. & Breslow, L. Relationship of physical health status and health practices. Preventive medicine, 1: 409-421 (1972).
10. US Department of Health and Human Services. Strategies for promoting health for specific populations. Washington, DC, US Government Printing Office, 1981 (DHHS Publication No. 81-50169).
11. McAlister, A.L. Theory and action for health promotion: illustrations from the North Karelia Project. American journal of public health, 72: 43-49 (1982).
12. Taylor, R.B. Health promotion: can it succeed in the office? Preventive medicine, 10: 258-262 (1981).
13. Rootman, I. A conceptual framework for a national health promotion survey. Ottawa, Health and Welfare Canada, 1982 (Health Promotion Directorate working document).
14. Rootman, I. Using health promotion to reduce alcohol problems. In: Grant, M., ed. Alcohol policies. Copenhagen, WHO Regional Office for Europe, 1985 (WHO Regional Publications, European Series, No. 18).
15. Mahler, H. World Health Day 1981. WHO chronicle, 35: 79 (1981).
16. Institute of Medicine. Alcoholism, alcohol abuse, and related problems: opportunities for research. Washington, DC, National Academy Press, 1980.
17. Jessor, R. A psychosocial perspective on adolescent substance use. In: Litt, I., ed. Adolescent substance abuse: report of the Fourteenth Ross Roundtable. Columbus, OH, Ross Laboratories, 1983.
18. Jessor R. & Jessor, S.L. Problem behavior and psychosocial development: a longitudinal study of youth. Orlando, Academic Press, 1977.

19. Jessor, R. Adolescent development and behavioral health. *In*: Matarazzo, J.D. et al., ed. *Behavioral health: a handbook of health enhancement and disease prevention*. New York, John Wiley and Sons, 1984.
20. Bandura, A. *Social learning theory*. Englewood, NJ, Prentice-Hall, 1977.
21. Fishbein, M. & Ajzen, I. *Belief, attitude, intention, and behavior: an introduction to theory and research*. Reading, MA, Addison-Wesley, 1975.
22. Seeman, M. & Seeman, T.E. Health behavior and personal autonomy: a longitudinal study of the sense of control in illness. *Journal of health and social behavior*, *24*: 144-160 (1983).
23. Kobasa, S.C. Stressful life events, personality, and health: an inquiry into hardiness. *Journal of personality and social psychology*, *37*: 1-11 (1979).
24. Kobasa, S.C. et al. Personality and exercise as buffers in the stress-illness relationship. *Journal of behavioral medicine*, *5*: 391-404 (1982).
25. Garrity, T.F. et al. Personality factors in resistance to illness after recent life changes. *Journal of psychosomatic research*, *21*: 23-32 (1977).
26. Comstock, G.W. & Partridge, K.B. Church attendance and health. *Journal of chronic diseases*, *25*: 665-672 (1972).
27. Graham, T.W. et al. Frequency of church attendance and blood pressure elevation. *Journal of behavioral medicine*, *1*: 37-43 (1978).
28. Botvin, G.J. Broadening the focus of smoking prevention strategies. *In*: Coates, T.J. et al., ed. *Promoting adolescent health: a dialog on research and practice*. Orlando, Academic Press, 1982.
29. Perry, C.L. & Murray, D.M. Enhancing the transition years: the challenge of adolescent health promotion. *Journal of school health*, *52*: 307-311 (1982).
30. Vartiainen, E. *Changes in cardiovascular risk factors during a two-year intervention programme among 13 to 15 year old children and adolescents*. University of Kuopio, Finland, 1982 (unpublished doctoral dissertation).
31. Blackburn, H. et al. The Minnesota Heart Health Program: a research and demonstration program in cardiovascular heart disease prevention. *In*: Matarazzo, J.D. et al., ed. *Behavioral health: a handbook of health enhancement and disease prevention*. New York, John Wiley and Sons, 1984.
32. Coates, T. J. et al. Primary prevention of cardiovascular disease among children and adolescents. *In*: Prokop, C. & Bradley, L., ed. *Medical psychology*. Orlando, Academic Press, 1981.
33. Tell, G. Factors influencing dietary habits: experiences of the Oslo Youth Study. *In*: Coates, T.J. et al., ed. *Promoting adolescent health: a dialog on research and practice*. Orlando, Academic Press, 1982.
34. Wynder, E. et al. Screening for risk factors for chronic disease in children from fifteen countries. *Preventive medicine*, *10*: 121-132 (1981).
35. Sunseri, A.J. et al. *Children as reinforcers of adult health education*. Chicago, Chicago Heart Association, 1982 (Chicago Heart Health Curriculum Program Report).
36. Pechacek, T. *Quit and Win: report of a community smoking campaign*. Minneapolis, University of Minnesota, Division of Epidemiology, 1983 (Minnesota Heart Health Program working document).
37. Perry, C.L. et al. Adolescent smoking prevention: a third-year follow-up. *World smoking and health*, *1*: 40-45 (1980).
38. Allegrante, J.P. & Green, L.W. When health policy becomes victim blaming. *New England journal of medicine*, *305*: 1528 (1981).
39. Allegrante, J.P. The potential uses and misuses of education in health promotion and disease prevention. *Teachers College record*, *86*: 359-373 (1985).

A FRAMEWORK FOR PREVENTION: CHANGING HEALTH-DAMAGING TO HEALTH-GENERATING LIFE PATTERNS[a]

by
Nancy Milio

It is a paradox that health professionals, in their efforts to improve people's health-related practices, seem to expect more of the ordinary consumer than they do of themselves. Almost all patient and consumer health education assumes, explicitly or implicitly, that if people know what is most healthful, they will do it.

Perhaps the most obvious test of this assumption is to look at health professionals themselves. If knowing what is health-generating were directly related to doing, then surely we in the health field would be among the most robust in the nation, slim, agile, nonsmoking, temperate eaters of complementary protein, low-fat and cholesterol, low-sucrose, and nonrefined carbohydrate foods, avoiders of drugging levels of alcohol and other artificial mood-changers, evenly paced in our daily patterns. This picture is obviously nonexistent. Nor do we expect it to exist. Most will recognize that it is not much more likely for a physician earning $85 000 a year to change his life pattern than for a $6000 a year hospital aide to do so. However, the potential for lifestyle change, the array of options available to these two individuals, may differ considerably.

The point is that most human beings, professional or nonprofessional, provider or consumer, make the easiest choices available to them most of the time, and not necessarily because of what they know is most healthful. Thus, if it is agreed that health-promoting life patterns are a good thing, then the focus for changing behaviour should be on the problem of how to make health-generating choices more easy, and how to make health-damaging choices more difficult.

A time for change

There is increasing national and even international interest in the problems of "primary prevention" of disease, "health education", "lifestyle changes", etc. This is occurring, in part, because of studies which indicate the historic and contemporary limitations of medical care for improving the health of populations. Those limits include the narrowing impact that traditional, microbe and infestation-oriented preventive programmes can have on the modern profile of chronic and degenerative illness and violent deaths (1-8).

---

[a] This paper was issued in: American journal of public health, 66(5): 435-439 (1976).

A more immediate impetus for serious attention to illness prevention is the uncontrolled rising costs of personal health services. This derives from the capital- and energy-intensive nature of the inpatient facilities and technology which dominate health care organization, and is aggravated by inflation in the national economy. As greater shares of health care financing come from governmental sources, more concerted efforts will be made to control costs. One such major effort is to find ways to prevent major disease entities, principally chronic illnesses and accidents.

Two recent developments are focused on this issue. One is the National Health Education and Promotion Bill which requires health education in delivery systems and sets up mechanisms for nationwide development, testing, and dissemination of methods to promote health-generating behaviour. Another important event was the National Conference on Preventive Medicine. Studies cited above, the 1300 pages of Senate health education hearings, and many Conference Task Force papers thoroughly review the "state of the art" of disease prevention, and document the limitations of contemporary health services. These will not be reiterated here (9,10).

Recommendations from these sources concerning what needs to be done cover a broad spectrum. Some groups recommend educational programmes in the elementary schools, in adult education classes, in health services settings using small group techniques; or for the general public, using the media and other advertising and mass communications methods. Others emphasize federal policy changes not directly related to personal health services or to conventional education/information/persuasion methods, such as placing a high tax on cigarettes, the funds to be used in the research and treatment of lung disease.

What follows here is a preliminary effort to place in context, as an interrelated set of working hypotheses, the well founded but seemingly divergent recommendations of numerous groups actively concerned with the problem of enhancing health-promoting life patterns and/or discouraging health-damaging habits.

A set of propositions

1. The health status of populations is the result of deprivation and/or excess of critical health-sustaining resources. Health-sustaining resources include the seminal ones (e.g. food) or the synergistic ones (e.g. basic education, health services). In any population those subgroups which are deprived of sufficient and safe food, water, shelter, and environment have great vulnerability to acute, infectious disease processes. The poor in Third and Fourth World countries are the most stark examples. The population subgroups which are affluent have disease resulting from too much food (e.g. obesity and hypertension) of the highest cost varieties (e.g meat, concentrated sucrose, refined carbohydrates, and fats); alcoholic, caffeinated and other drinks, and other dangerous relaxants (e.g. drugs, smoking, passive use of leisure); too rapid transportation and communication - often resulting in accidents and in stressful work overloads dealt with in sedentary posture. Excessive environmental pollution arises from the production/consumption patterns of this affluent way of life. Affluent urban Americans are the best example.

Somewhere between the very poor and the affluent are the population subgroups, having a low income but living in a relatively affluent or "advanced" society. Low-income Americans are not only more vulnerable to acute disease relative to their affluent counterparts, but also sustain more of the chronic degenerative illnesses and accidents which are integral to the affluence of the wider society. The cigarettes, sucrose, cars, pollutants, and tensions are readily available to the poor, while at the same time they are deprived of the level of protection afforded by the quality of food, shelter, and environment which sustain the more affluent. The poor not only succumb more readily to virtually all disease processes, they also possess fewer options for getting the damage repaired or contained through the medical care system. These socioeconomic realities thus form the basis for the typical lifestyle or behaviour patterns which result in the varying illness profiles of different population subgroups (11-16).

2. Behaviour patterns of populations are a result of habitual selection from limited choices, and these habits of choice are related to: (a) actual and perceived options available; (b) beliefs and expectations developed and refined over time by socialization, formal learning, and immediate experience.

Ordinary, "average", day-to-day behaviour stems from daily choices that are relatively set and no longer consciously made. These choices have been limited by what is actually available to groups of people and what they perceive to be available or possible. Their knowledge of the possible and their perceptions are influenced by what they have learned in the past, informally and nonverbally as well as formally, and by what they experience (17).

Applied to consumers, this is a point at which new health information and knowledge may influence individual choice making under certain conditions.

3. Organizational behaviour (decisions or policy choices made by governmental/nongovernmental, national/non-national, non-profit/for-profit, formal/non-formal organizations) sets the range of options available to individuals for their personal choice-making. Organizational decisions directly affect the options available to people and/or their awareness of those options and/or the ease with which they may make daily, habitual, selections (17,18).

For example, federal policy decisions concerning taxation, business subsidies, tax incentives, and import/export restrictions affect whether and how much of such items as cigarettes and palatable soya protein will be available, how widely distributed and advertised, and at what price. These decisions set the array of options available to various economic and geographic populations concerning the ease with which they may or may not choose such items.

As another example, combinations of policy choices by such organizations as city government and public and private housing, transportation, and banking firms concerning land use set the range of options available to population subgroups concerning where they may or must live and work, and the means and speed of their transportation (therefore how physically active they may be, how fatiguing or compact their day, how clean their air). Such policies also determine which of the available array of options are the easier.

National governmental decisions concerning the political economy in a country such as China stand in marked contrast to those in the USA. The result in China has produced forms of social organization such as rural communes and urban neighbourhood and industrial-worker networks which facilitate collective decision-making within organizations. Collective or small group decision-making can then become a mechanism by which participants can develop new options themselves as well as be supported in the reinforcement of the new choices which they make, concerning community and personal health care among other things (19-22).

4. The choice-making of individuals at a given point in time concerning potentially health-promoting or health-damaging selections is affected by their effort to maximize valued resources. Choice is therefore related to the type and amount of:

(a) their personal resources: their awareness, knowledge, beliefs and skills; those of family, friends, and of other primary (small, face-to-face) groups; available money and time; convenience concerning distance, travel, transportation; the urgency of other priorities; and

(b) societal (community and national) resources: the availability of health-sustaining services and resources in terms of cost, distance or location, type, comprehensiveness, programme outreach components (e.g. food, housing, income maintenance, environmental protection, health services); alternatives to formal services; penalities or losses incurred, or rewards given, for selection or failure to select given options.

All of these resources implicitly or explicitly limit or widen the array of options available to individuals for retaining or altering health-related habitual choices, and determine the ease with which new, possibly more healthful choices may be made. Any change in pattern would involve some effort or cost and some actual and/or perceived gain.

An example might be the $85 000 a year physician and the $6000 a year aide, both of whom have mild hypertension and each of whom would benefit by a more healthful lifestyle. Given that both are made aware of what shifts in behaviour would be most likely to have health-enhancing effects, it is quite apparent that the physician has a potentially greater opportunity to adopt a more health-promoting pattern of daily choices because of his personal resources.

The physician may conceivably slow the pace of his life by choosing to live closer to his work in the urban medical centre in a quiet town-house. He may take more frequent vacations as a means to relax and thereby diminish the need for cigarettes, alcoholic drinks, or other drugs. He would have no serious financial problem in obtaining palatable meals within calorie/cholesterol/sodium limits in restaurants or specially prepared for him alone. Medical centre fringe benefits would allow him ample sick leave, medical insurance, pension, and other supportive resources.

The aide earning $6000, typically a woman, possibly with adolescent children, has fewer options for making new choices. There is virtually no chance for her to find even a low-paying job in a less hectic environment. Without rapid transit, moving the household to a less congested area is out of the question, even if such housing were available. To work fewer hours is not an option since her husband is sporadically employed at best. Besides, taking too much time off may risk her job security. There is little extra time or money to change the family's customary diet, and food and cigarettes are two of the very few options left for relaxation and pleasure. Neither friends nor family, though willing, have enough resources to share to make a difference. The medical clinic which diagnosed her condition has no consistent methods to intervene and offer help in her home situation.

For either individual, the physician or the aide, the personal and societal resources will not determine whether or not they will alter their life patterns. But those resources will make the likelihood that each one can change - given an initial moderate willingness to do so - either more or less a possibility. This is because of the array of options before them, and because some of those options, health-promoting or health-damaging in their net effects, are easier to choose than others.

5. Social change may be thought of as changes in patterns of behaviour resulting from shifts in the choice-making of significant numbers of people within a population.

In order then for lifestyle patterns to alter among individuals in numbers sufficient to affect the incidence of major diseases, new, health-promoting options must be available, and more readily so than health-damaging options, i.e. in such a way as to be less costly in dollar and other costs. People also must be aware of the new options and of what they can gain from selecting them relative to their former choices.

6. Health education, as the process of teaching and learning health-supporting information, can have little significantly extensive impact on behaviour patterns, that is, on personal choice-making of groups of people, without the easy availability of new, or newly perceived alternative health-promoting options for investing personal resources.

Typically, what has been regarded as health education has focused on providing consumers with information or knowledge in order to make them aware of the costs and benefits to their health to be derived from particular behaviours. The relative lack of other options from which to choose new behaviour patterns has not been dealt with realistically, particularly for outcast groups, such as rural and lower income. It is not enough to make people knowledgeable about health-promoting choices. The other side of the coin is to provide ready access to health-promoting options (10,23-25).

The strategy of making health-promoting options easier is implicit in the small group approach to behaviour change, e.g. weight reduction, cessation of smoking or alcohol consumption. By becoming an integral part of a group which approves of certain choices, individuals can more easily make such choices. Thus by choosing low-calorie foods they gain the short-term reward of group approval and avoid its disapproval, as well as gaining the longer-term reward of weight reduction. The reward is apparently greater than in the typical individual counselling method, making the group approach the more successful (10).

However, the small group approach is limited for several reasons. It is costly to individuals in both time and money, and would be very costly to the delivery system were it applied extensively enough to impact on the behaviour of large populations. Its benefits, measured in terms of impact on groups of people, are not very efficient. This approach has successfully reached just over an estimated 2% of all smokers; further, as another common example, up to 4 out of 5 members of weight-control groups may drop out. There is also some question as to whether the changes in behaviour that do occur are large enough to be clinically significant (26-28).

In one report, a mass media approach was combined with small group techniques for clinically high-risk groups. There was an increase in knowledge and change in attitudes concerning health-relevant choice-making, but relatively little change in actual behaviour. Change included a lessening, but not cessation of smoking, and a drop in the number of eggs eaten - a change which also occurred in the non-experimental population apparently related to the economic situation of the communities involved (29). Choice-making regarding physical activity and exercise was unchanged.

This non-change is understandable in terms of the earlier discussion about gains and losses of resources. Activity patterns reflect daily concentrations of work, job, leisure, housing location, available transportation, family responsibilities, etc. As such, they are integral to both family and community choice-making. Even a strong desire by an individual to alter and increase his or her physical activity would require a sustained effort if the readily available options in the family/home, job/community favour time-consuming and sedentary or light activities. Under these conditions, a burst of effort at increased exercise is likely to subside and accommodate again to customary, more readily taken options for less physically exerting activity patterns of household and community (30).

The small group approach seems somewhat more efficient when applied to patients, especially those who are seriously ill (9,31). This again is understandable. Ill people have relatively more to gain by making choices which will diminish their symptoms and restore their ability to live more painlessly and with less effort.

As awareness of the limitations of traditional health education grows, a contemporary concept is developing which includes, along with information and motivation, change-making in the living environment, conceivably to the broadening of healthful options for personal choice-making (32). There is also evidence of more comprehensive and planned approaches to health education, with increasing emphasis on cost-effectiveness and the evaluation of results, including the measurement of changes in behaviour and health status (9,33-37).

Summary

These hypotheses provide a framework in which health status of populations at a given point in time is viewed as the outcome of customary personal choice-making. These choices in turn are limited by the actual and perceived options available to individuals, which reflect their personal and their community's resources. Most people, most of the time will make the easiest choices, that is, will develop the patterns of behaviour or lifestyles which seem to cost them less and/or from which they will gain more of what they value in tangible and/or intangible terms.

The range of options available to populations, and the ease with which they may choose certain ones over others, is typically set by organizations, public and private, non-profit and for-profit, formal and informal. This is done through the organizations' capacity to determine policy choices which affect the allocation and distribution of various kinds of amounts of goods and services and their price, direct or indirect, to the user. The more powerful the organization, that is, the more effective it is in carrying out its policies, the more it affects the options available to other organizations and populations, whether or not these effects are immediately perceived by individuals in their day-by-day choice-making.

Implicit in this view of organizational decision-making and individual choice-making as they affect health-relevant patterns is the notion of a pyramid of decisions. The decisions taken at the "higher", more powerful organizational levels, set the range of options available at lower levels. This may be seen in the ways in which both federal government or multinational and large-scale corporation policies concerning food, energy, transportation, or antipollution enforcement ultimately affect not only the policy choices of public and private bodies at state and local levels, but also the individual in his and her daily choices about diet, residence, exercise and pace of life (18).

Implications

Given this framework, strategies for encouraging health-promoting choices may also be put in perspective. Their minimal aim, for example, might be to broaden the range of options available to people and to make health-promoting choices easier and/or to diminish health-damaging options by making them more difficult to choose. For the most widespread impact, the focus might be on national-level policy-making which would in turn change the range of options for the largest number of people, i.e. the national population. Selected populations, those most vulnerable to ill health because of the limited healthful options available to them, might also receive special attention.

This frame of reference can also help assess or project the relative effectiveness of various efforts at behaviour change. For example, a local effort at conveying more knowledge about healthful diets is not likely to result in changes of eating patterns unless it is accompanied by a combination of healthful, low-cost, readily available foods - changes which require effort beyond the individual or small group methods, and extend to the community public and private organizational structure.

The question may be raised that this perspective suggests a manipulation of behaviour, a constraint on freedom. Quite the contrary, since as this discussion shows, current policy and allocative decisions clearly constrain personal choice-making, even if not so perceived by many people. This framework rather suggests strategies which will enhance the freedom to choose, making it readily possible for individuals and groups who now have difficult options to create healthful lifestyles. Those who wish to pursue health-damaging patterns would still be able to do so.

These are working hypotheses, not yet sufficiently refined to be fully testable. Hopefully, passage of an adequate National Health Education and Promotion Act will make possible the development and testing of such models in order to help health professionals and consumers focus effectively on the prevention of disease rather than on its repair or containment.

REFERENCES

1. Freymann, J. Medicine's great schism: prevention vs. cure: an historical interpretation. Medical care, 13: 525-536 (1975).
2. Powles, J. On the limitations of modern medicine. Science, medicine and society, 1: 1-30 (1973).
3. McKeown, T. et al. An interpretation of the modern rise of population in Europe. Population studies, 26: 345-383 (1972).
4. Illich, I. Medical nemesis. London, Calder & Boyars, 1975.
5. Carlson, R. The end of medicine. New York, Wiley, 1975.
6. Screening for disease (series). Lancet, 5 October through 14 December (1974).
7. Cochrane, A.L. Effectiveness and efficiency. London, Nuffield Provincial Hospitals Trust, 1972.
8. Minister of National Health and Welfare. A new perspective on the health of Canadians: a working document. Ottawa, Government of Canada, 1974.
9. US Senate. Hearings on national health promotion and education 1975. Subcommittee on Health, 7-8 May 1975. Washington, DC, Senate passed S. 1467.
10. Task Force reports for the National Conference on Preventive Medicine. In: Hearings, op. cit.
11. National Center for Health Statistics. Vital and Health Statistics Series from the ongoing Health Interview Survey, the Health Examination Survey, Health and Nutrition Survey, National High Blood Pressure Survey. Rockville, MD, HEW Health Resources Administration, 1973.
12. Milio, N. et al. Simplified primary care data guide (in preparation).
13. Milio, N. The care of health in communities: access for outcasts. New York, Macmillan, 1975.
14. Puffer, R. & Serrano, V. Patterns of mortality in childhood. Washington, DC, Pan American Health Organization, 1973.
15. Hinkle, L. Ecological observations of the relation of physical illness, mental illness, and the social environment. Psychosomatic medicine, 23: 289-297 (1961).
16. Cairns, J. The cancer problem. Scientific American, November 1975.
17. Moss, G. Illness, immunity, and social interaction: the dynamics of biosocial resonation. New York, Wiley, 1973, Chapter 3.
18. Waldron, I. & Eyer, J. Socioeconomic causes of the recent rise in death rates for 15-24 year-olds. Social science and medicine, 9: 383-396 (1975).
19. Milio, N. Organization and power: the Israel kibbutz and Chinese commune. A comparative study in social organization. New Haven, CT, Yale University Departments of Sociology and Far Eastern Studies, 1969 (unpublished manuscript).
20. Milio, N. Co-mingling rings: can organizations become self-renewing? Intention: a journal of alternative institutions. June 1971.
21. Terrill, R. The 800 000: the real China. Boston, Atlantic-Little-Brown Books, 1972.
22. Newell, K., ed. Health by the people. Geneva, World Health Organization, 1975.
23. Stycos, J.M. The clinic and information flow. Ithaca, NY, Cornell University, 1974.
24. Coburn, D. & Pope, C. Socioeconomic status and preventive health behavior. Journal of health and social behavior, 15: 67-78 (1974).
25. Steele, J. & McBroom, W. Conceptual and empirical dimensions of health behavior. Journal of health and social behavior, 13: 382-392 (1972).

26. Farquhar, J. Interdisciplinary approaches to heart disease prevention. *In*: *Hearings*, *op. cit.*
27. Green, L. Diffusion and adoption of innovations related to cardiovascular risk behavior in the public. *In*: *Hearings*, *op. cit.*
28. Pomerlau, O. et al. Role of behavior modification in preventive medicine. *New England journal of medicine*, *292*: 1277-1282 (1975).
29. Maccoby, N. Achieving behavior change via mass media and interpersonal communication. *In*: *Hearings*, *op. cit.*
30. Institute for Communications Research. *Annual report 1973-74*. California, Standford University, 1974.
31. Rosenberg, S. A case for patient education. *Hospital formulary management*, *6*: 1-4 (1971).
32. *Toward a national policy of health promotion and consumer health education*. Task Force report IV. National Conference on Preventive Medicine, 9-11 June 1975. Washington, DC.
33. Simmons, J., ed. Making health education work. *American journal of public health*, (Suppl.): 65 (1975).
34. APHA Committee on Educational Tasks in Chronic Illness. *A model for planning patient education*. Washington, DC, NIH, 1970.
35. Kucha, D. *Guidelines for implementing an ambulatory consumer health information system: a handbook for health education*. Texas, 1973 (US Army-Baylor University Graduate Research Series).
36. Young, M. Review of research and studies related to health education practice. *Health education monographs*, Vols. 23-28 (1967-1969).
37. Green, L. & Figa-Talamanca, I. Suggested designs for evaluation of patient education programs. *Health education monographs*, *2*: 54-71 (1974).

IV. IDENTIFYING THE ACTORS AND THEIR ROLES

PROMOTING HEALTH, PREVENTING DISEASE: WHAT SHOULD THE NHS BE DOING NOW?*

by
John C. Catford & Don Nutbeam

There should be little doubt that treatment and caring services, along with preventive services, have contributed to improvements in health in this country. Classic examples are found in the cure of pneumonia with antibiotics, the avoidance of handicap through joint replacements, control of schizophrenia with phenothiazines, and the alleviation of suffering with effective pain control. However, there is increasing awareness that further substantial advances in promoting health can come only through a preventive approach rather than a treatment one. This is because on the one hand many of the causes of ill health are known and are preventable but little has been done to implement preventive programmes. On the other hand, it appears increasingly that treatment services are fast approaching a plateau. This is in part due to the very success of treatment services but also because:

- Curative medicine is subject now to the law of diminishing returns. Considerable expenditures are required for the additional resources of manpower, technology and drugs to achieve a comparatively modest gain (2).
- Advances in fundamental treatment-orientated research have slowed and the availability of innovative treatments has dramatically fallen. For a decade or more, most new products have been minor modifications only and companies now have fewer promising candidate drugs. Whereas 20 years ago one new compound in 4000 might have been expected to reach the market, now the figure is 1 in 10 000 to 12 000 (3).

It would be optimistic therefore to expect another therapeutic revolution in the next 20 years. In comparison, both Morris (4) and Doll (5) have recently demonstrated that the prospects for prevention are considerable, but that very little attempt has been made to put knowledge into practice.

A considerable proportion of handicap and premature death is avoidable. Of this, cancer and arterial disease account for the majority. Doll & Peto (6) have estimated that 40% of cancer could be prevented through the application of current knowledge. The Royal College of General Practitioners' Working Group on Prevention (7) considered that arterial disease could be reduced by 25%. Deaths and disability from bronchitis, emphysema and peripheral vascular disease are largely preventable through the avoidance of smoking (8). Attention to malnutrition, both pre- and post-conception, could also dramatically improve the outcome of childbirth.

---

* This article was published in Health education journal, 42(1): 7-12 (1983). It is based on a paper given at a scientific meeting of the Faculty of Community Medicine of the Royal College of Physicians, Winchester, 14 December 1982 (1) and on earlier presentations to groups of health education officers.

Goals and policies for prevention are comparatively easy to promulgate, but without an infrastructure and a climate of opinion there will be little progress in achieving them. In attempting to answer the question "What should the NHS be doing now to promote health and prevent disease?" we will be considering the obstacles to progress and ways of overcoming them. For example, why do we spend so little in the NHS (National Health Service) on health education? Dr Keith Taylor, a former Director General of the Health Education Council, calculated this amount to be 0.17% of the cost of the health service (9). His estimates included the cost of the Health Education Council, NHS health education units, and the time spent by health professionals in health educating, generously assumed to be about one twentieth of their activities.

In examining the barriers to health promotion and disease prevention (HP/DP) we will illustrate how we have begun to overcome them in Wessex. In 1980 a regional health promotion team, the Wessex Positive Health Team, was set up, comprising ten or so representatives of various interested disciplines within the region. The work of the team will be referred to, as well as that of other groups, university departments, etc. with which the team has developed close links. We should like to suggest that there are at least nine obstacles within the NHS and these will be discussed in turn. It is, of course, important to stress that other bodies such as central and local government, industry, trade unions, etc. have an important part to play. However, an appraisal of what they should be doing is outside the remit of this paper.

Lack of defined responsibility

Few would disagree that the demise of the medical officer of health with the 1974 reorganization led community physicians away from perhaps their most important and unique contribution - that of defender of the public health. They were inevitably drawn into the treatment/hospital/medicopolitical arena. Few district community physicians after 1974 had the same time for advancing health promotion as they did in their former incarnation. The new district medical officers will be in an even more difficult situation. However, as facilitators of health promotion they have an important and indispensable role but cannot normally be the spearhead of action at local level. That duty needs to be passed to someone else.

It is encouraging to see that HP/DP is being written into the job descriptions of specialists in community medicine at district level, but some districts may not be fortunate enough to have a second community physician, and in others this task may not be right for them. We would suggest, therefore, that a HP/DP brief be passed to another officer of senior status. One logical choice would be to develop the role and status of the district health education officer. There may be other alternatives. Perhaps this is the health promotion officer that John Dennis attempted to define recently in The health services (10). Research and administrative back-up would be essential for this leader as we have found in Wessex.

Lack of a coordinated workforce

The next obstacle concerns the need for an interdisciplinary approach. Health promotion and disease prevention are considerably more diverse activities than they were 100 years ago. Then it was the physical environment that was the target for action, but now it is individual lifestyles and the socioeconomic factors that influence them. Skills and resources from a number of disciplines are required. Nursing input for example is vital, nurses outnumber all other NHS occupational groups. Not only do health visitors have a special health promotion brief, but hospital and community nurses have the opportunity of including health education into the nursing process - a largely unexploited opportunity so far.

In making the change towards a HP/DP approach we must be careful not to alienate those involved in the treatment services. We need the full support of clinicians, and indeed their full participation. There can seldom be a simple choice between prevention or cure, nor a simple split of workload. Much HP/DP work needs to go on at primary care level, so the support and input of general practice is important. So too is that of hospital doctors who can be influential health educators and are of course an integral part of many screening programmes.

As well as doctors and nurses there are other key and indispensable people required to put prevention into practice. Health education officers play a vital role as facilitators for change as well as providers of health education training and resource material. Administrators also have a unique contribution to make in planning and implementing health promotion policy. Outside the health service, teachers, environmental health officers, home helps, social workers and many others can all play a part in the process.

To harness and coordinate this workforce a team or group has to be formed. According to local circumstances, this could be informal or formalized if it would help with the processing of policies and programmes. Wessex has been keen to promote the setting up of district and regional health promotion teams. A resolution to this effect was passed unanimously at the 1982 Conference of the National Association of Health Authorities. The Wessex Positive Health Team has now been in existence for three years or so. Membership is wide-ranging in terms of geography and specialty. It includes officers at senior level as well as a District Health Authority (DHA) chairman and a Regional Health Authority (RHA) member. Many of our districts now have embryo health promotion teams which, unlike the regional group, have an important operational role.

Lack of direction

Policies for health promotion and disease prevention, if they have existed, have tended to be ad hoc and narrow in range. A great deal of work still needs to be done to determine priorities. However at regional and national level some goals are emerging. For example, in the Wessex regional plan, we have made a start at defining policies for smoking, exercise, screening, immunization, etc. We are well advanced in setting priorities regarding the prevention of physical handicap and disability (11). In this project we have attempted to rank causes of handicap according to their prevalence, severity, age of onset and preventability. Of the very severe handicaps it was found that:

- 35% was due to arterial disease,
- 24% from arthritis,
- 14% from senility/parkinsonism,
- 8% from CNS disorders,
- 6% from trauma,

- 3% from respiratory disease,
- 3% from blindness,
- 3% from childhood disorders.

Examination of the scope for the prevention of these conditions revealed that there were eight key areas for preventive action in the following order of importance:

- smoking,
- hypertension,
- nutrition and exercise,
- accident prevention,
- antenatal care,
- immunization,
- child health screening.

The scope for prevention of handicap appeared considerable. For example, the prevention of 25% of arterial disease handicaps seemed a realistic goal (7).

Lack of information

One of the major problems the NHS faces is that there is virtually no information for planning and evaluation of HP/DP. We do not know how well we are doing nor what level we have reached. Does Portsmouth have a bigger smoking problem than Southampton or is it obesity that is the thing to tackle above all else? Do our elderly take more physical exercise than in the industrial north and do more of our middle-aged men have regular blood pressure checks that in London?

In a recent paper (12) we have argued that investment needs to be made at district level in commissioning small surveys to measure lifestyles which are known to influence health, e.g. smoking, exercise, nutrition. Measurement of the uptake of preventive services such as antenatal care, childhood screening, are also important. We have made a start at improving our data base in Wessex (13) in such areas as:

- seatbelt wearing and accidents,
- exercise participation,
- smoking in NHS premises,
- preventive activities undertaken by general practitioners,
- health knowledge amongst health professionals and ancillary workers,
- sexually transmitted diseases,
- nutrition,
- breast self-examination practice and knowledge,
- contraceptive usage,
- dental health.

This information is not only necessary for management and planning functions but it also enables us to capture the interest of the press and subsequently the public. Most of the information we generate in the health service is for our own consumption and is largely resource- and utilization-related. Little filters outside and what there is tells us nothing about the health of the population. The medical officer of health reports of yesteryear are sadly missed. We believe there is a strong case now for regular health profiles, for public as well as health service consumption. These would concern aspects of both negative health (i.e. mortality and morbidity), as well as of positive health (e.g. lifestyles, social and economic trends).

Lack of involvement

The importance of harnessing the support of clinicians and other disciplines within a health promotion team, has already been mentioned. As well as the general public, there are some other groups which should be involved if health promotion is to be put into practice. These include the press, authority members, community health councils and local government officers.

Our experience in Wessex is that the press can be enormously helpful. This is perhaps quite a contrary view to that often expressed. Through our regional public relations office, we now have excellent links with the media. The front page of a newspaper is a much better place to launch a health promotion issue than a small block on the advertising page next to secondhand cars and washing machines. Also it is free. A good example of this can be seen with two recent Positive Health Team publications, known as Lifeline Reports (9,14). Press releases were sent out the day that the RHA formally endorsed them. Professionals willing to be interviewed were already prepared. By orchestrating a coordinated launch, we estimate that we received around £150 000 worth of free top-rate publicity which promoted dental health and the importance of community commitment to HP/DP.

Authority members and community health councils have much to contribute. As well as understanding the importance of prevention, many of them realize they have a role to play as community leaders. In February 1982 we held a large conference for our shadow DHAs, DMTs and Community Health Councils. The response was staggering, with an audience of 300 attending. The success of the conference can be judged by the subsequent expansion and strengthening of health education units and the setting up of district health promotion teams in the region.

Finally, we need to involve those working within local government. Teachers are perhaps the obvious example, but there are other workers that could have an important role to play, such as home helps, social workers and community development officers. We also need to have closer contact with the managers of recreation services, particularly if we are to raise the level of physical activity within the community. Joint promotional campaigns could well meet both the needs of health authorities and local government. For example, we recently jointly sponsored a conference with the Association of Recreation Managers, on exercise and health. There was a very satisfying response from health professionals such as health education officers and physiotherapists, as well as from local government with physical education teachers and leisure and recreation officers.

Lack of professionalism

To meet the new challenges in HP/DP we need to change gear in our approach. This should no longer be an age of retaliation using the home guard reserve, but rather a time of pre-emptive strikes with a finely tuned task force. Dr David Player (15) has shown how in Scotland they have been marketing health as one would do with a consumable product, a proactive rather than reactive approach. Our own seatbelt initiative (16) which led on to lobbying in favour of legislation taught us a lot about mounting a professional public relations exercise. It is acknowledged by those in and outside Parliament that our efforts may well have tipped the balance in favour of legislation. This was finally agreed in a free vote in July 1981 after ten years of energetic but unprofessional campaigning.

We are also trying to improve the quality of our work in other ways. One is harnessing the expertise and interest of university departments, non-clinical as well as medical. For example, we have joint projects now with the departments of education, psychology, physical education, nutrition, social policy and operational research.

"Operation Smokestop" is being coordinated and evaluated by the Southampton Department of Psychology with RHA and DHA support. This involves setting up training programmes for would-be self-help group leaders who would like to start a stop-smoking group. The medical model has been dismissed for a behavioural one. One hundred leaders have so far been trained and preliminary results after only ten months suggest a 50% stopping rate at the end of the group courses (17).

Lack of imagination

Continuing with the same approaches can not only be very boring but may also be counterproductive. Some of our health promotion methods have become terribly stereotyped. Should it be another immunization campaign or one against head lice? There needs to be continuing innovation and excitement particularly if health is to be kept constantly before the eyes of the public and key decision-makers.

One example of how we have tried to be imaginative in Wessex is to latch on to the interest in jogging and fitness. There is a considerable case in favour of promoting greater participation in exercise, particularly brisk regular and sustained activity. In 1982, the RHA put aside £10 000 to set up an exercise sponsorship fund. The objective was to encourage local communities to hold high-profile exercise events in which all ages could participate, such as fun runs, cycling and swimming events, health and exercise courses, etc. The response has been overwhelming and we are hoping to expand the scheme and include an evaluation element. The origin of the funds is interesting. They came from the profit of invested endowment funds which normally would have been given to charity. As many of the events themselves raise money for charity we estimate that our seed corn has multiplied considerably.

Lack of resources

Health promotion and disease prevention require resources - sometimes a great deal of resources. Lack of funding is usually the main reason given for the slow progress. However, we would suggest that this excuse is all too easily given and that there are large pools of money as yet unexploited. Examples of these are given below.

Development money

Growth money is often considered to be the only way of making advances. If this is so, then the prospects look grim as many regions and districts have already reached a zero growth situation and the remainder are likely to follow shortly. Alternative sources must be found and indeed are available.

Existing resources

Considerable resources are already committed to preventive services. Determining priorities for HP/DP is difficult, but it may be that current expenditure is no longer allocated according to relative need. A recent survey of current policy and provision of preventive child health services in the region has shown marked variation between districts, in terms of policies, and health visitor and medical officer investment. Some have almost twice the resources as others with no obvious benefit. Not all of them can be right, and some districts are giving serious attention to the redistribution of current expenditure into other areas of HP/DP.

There are also resources within the Family Practitioner Committee which are not being used to the full for HP/DP, particularly practice nurses. Each principal in general practice can have two full-time attached helpers (e.g. nurse, receptionist, secretary) for which the Family Practitioner Committee will refund 70%. The average at the moment is 1.1 and most of these are half-time.

A practice nurse spending her time with hypertension screening, running self-help groups for smoking or obesity, could make a significant impact on improving the health of the practice. The 30% of her salary which the general practitioner has to bear directly could be made up from an increase in work where item-of-service payments are due such as cervical smears, contraceptive management, tetanus and other immunizations.

Alternatively, health authorities could discuss ways of providing a 30% top-up to some of the practices who would like to extend their preventive role.

Use of existing resources could also be facilitated through earmarking. No doubt this will continue to receive examination and heated debate. It is the only way, some would argue, of redirecting resources in a cost-limited no-growth situation.

Joint finance

Care in action (18) made it clear that joint finance can now be used for HP/DP. Local authorities are likely to be attracted to schemes with low revenue consequences such as capital projects and to those from which they are likely to benefit. HP/DP activities probably bring as many benefits to local government as they do to health authorities, e.g. birth control in deprived families, maintaining independence amongst the elderly. Resiting or re-equipping a health education unit is an ideal project as it could be a "one-off" investment. Alternatively, limited term programmes could be funded. For instance, in one district in Wessex, joint finance has been used to fund an enterprising schools health education programme which presents health concepts in the form of drama.

Charities

Many of the leading charities in the United Kingdom have as one of their objectives the prevention of the disorder for which they are concerned. Recently there has been considerable criticism that they have failed to fulfil this role unlike, for instance, the USA medical charities. This led one of the richest cancer charities to announce in the Lancet (19) that they were widening their activities in the field of prevention, particularly smoking. Considerable resources could be made available. For example to set up and evaluate Operation Smokestop, the Wessex network of stop-smoking self-help groups, a substantial grant has been obtained from the Cancer Research Campaign.

Voluntary workers

Many districts draw on volunteers to assist in their child health clinics, for example with the sale of welfare foods. The voluntary workforce is still a largely untapped resource for health care and if harnessed in the cause of HP/DP could be most useful. In one district we are about to investigate the use of suitably vetted volunteers who will routinely visit the elderly and administer a simple health questionnaire. The Community Health Council may well be able to suggest volunteers, as they have for example for a community based survey of antenatal services in one of our districts.

Health Education Council

With the expansion over recent years of the role and activities of the Health Education Council, it is possible for districts to discuss joint projects which would be directly applicable to their own situation. The Health Education Council also has a considerable research budget to set up and evaluate potentially useful projects. This could well provide the pump-priming needed, and could also demonstrate the value of a scheme to a district before it needed to be financially committed to it.

Research funds

A variety of research funds exist within the National Health Service, the Department of Health and Social Security and elsewhere. DHAs, like Area Health Authorities, will no doubt have discretionary funds which can be used for research. Wessex's own regional research scheme has supported a number of projects which have had prevention as a main theme. A current project is looking at the benefits of exercise in coronary rehabilitation. These funds are usually given for the research part of the project though the criteria vary.

Commerce and industry

A number of very successful preventive projects have been developed in conjunction with commerce and industry. Toothpaste manufacturers afford a good example. Over a number of years dental health promotion programmes have been financed, and various types of toothbrushing and toothpastes have been evaluated. It is clear that the present Government encourages enterprises of this kind which can benefit the population at no cost to the Exchequer. For example, there is no reason why bicycle retailers or travel agents should not support a local "Keep fit/look after yourself!" campaign.

Youth employment programmes

Over the last few years the Government has introduced work experience schemes for young people which it finances out of Exchequer monies. As the nation's largest employer, the health service must play its part in providing suitable places. As well as giving insight to the working of the NHS, the young people might well develop more positive attitudes towards the sick, the elderly, the handicapped, and also most importantly to recognizing the potential for improving their own health. Such workers could be very helpful in collecting and processing information on the preventive and community services. They could also carry out simple surveys amongst their own peer groups, for example, regarding smoking and alcohol. This information is normally very difficult to collect in more conventional ways.

Lack of commitment

We come now to the final obstacle to advancing HP/DP. The old saying that "where there is a will there is a way" is certainly a truism of HP/DP. We have described many of the stumbling blocks that exist and how they might be circumvented if there is sufficient commitment to making progress. Apathy towards HP/DP is by far the most serious obstacle, but there is no reason why it should not be overcome. Agencies such as the Department of Health and Social Security, the Faculty of Community Medicine, the Royal Colleges and the Health Education Council have an important part to play in ensuring that the NHS is committed to HP/DP - in terms of insisting that priorities are identified, programmes are devised and resources are allocated.

To ensure this commitment within the health service, we must return to our first point - that of defined responsibility. We need a champion for health promotion at a senior level within the authority. Someone to whom heads will turn when the word is mentioned. Someone who is able to motivate general practitioners, capture the enthusiasm of the press, reason with clinicians, win the support of authority members and so forth.

This should ideally be a community physician, who would be in a good position to harness and coordinate the various contributions. However, for a number of reasons - be it availability, interest, skills, etc. - this cannot be the only solution. A non-medical spearhead is an alternative - but if this is to work he or she must be a suitably trained senior officer.

A scale 9 health education officer is not an appropriate level - it will not attract the right sort of skills, nor the respect and status. It will not, in other words, command the right degree of investment. A scale 18 appointment is barely sufficient; perhaps we should think of scale 23 or 27 as a more realistic grade for a "District Health Promotion Officer". The new Whitley Council grading recommendations for health education officers is therefore welcomed as a starting point.

Conclusions

We have presented our views on why there has been slow progress within the NHS in implementing policies for prevention - and why the United Kingdom has fallen behind so many other countries. There can be no doubt that many other forces outside the health service affect health; nonetheless the NHS has enormous potential to improve the health of the population. By considering the obstacles within the NHS we hope that constructive ways of achieving this potential have emerged. What the NHS should be doing now to promote health and prevent disease, can be best summarized under the 5 Is: Identify, Involve, Inform, Invest, Innovate.

Firstly we need to Identify:

- a responsible senior officer,
- a planning and action team.
- the major health issues,
- priorities and programmes.

Then we need to Involve:

- health professionals,
- university departments,
- health authority members,

- community health councils,
- the media and general public.

Next Inform:

- health professionals and health authorities of the new advances in knowledge,
- the media and the public about the state of their own health and what they can do about it,
- planners and managers about the need for and outcome of HP/DP initiatives.

Then Invest:

- in developing a climate of opinion which promotes health as a valuable asset,
- in advancing programmes of likely or proven benefit,
- in commissioning research and evaluating performance.

Finally Innovate:

- to improve the effectiveness of programmes,
- to maintain the commitment of health professionals,
- to keep the momentum going in the media,
- to have an ongoing topic of public interest,
- to keep health promotion/disease prevention "up front".

REFERENCES

1. Catford, J. Health for all by the year 2000: what should the NHS be doing now? In: Progress in health promotion: UK and abroad. Handbook of a 1982 Scientific Meeting of the Faculty of Community Medicine, 13/14 December 1982. Winchester, King Alfred's College, 1982 (Wessex Regional Health Authority, Lifeline Report No. 6).
2. Department of Health and Social Security. Prevention and health, everybody's business. London, H.M. Stationery Office, 1976.
3. Prospects for a second therapeutic revolution. Lancet, 18 September 1982, p. 654.
4. Morris, J.N. Prospects for health promotion. In: Progress in health promotion: UK and abroad. Handbook of a 1982 Scientific Meeting of the Faculty of Community Medicine, 13/14 December 1982. Winchester, King Alfred's College, 1982 (Wessex Regional Health Authority, Lifeline Report No. 6).
5. Doll, R. Prospects for prevention: the 1982 Harveian Oration. London, Royal College of Physicians (in press).
6. Doll, R. & Peto, R. The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today. Journal of the National Cancer Institute, 66: 1193-1308 (1981).
7. Prevention of arterial disease in general practice. London, Royal College of General Practitioners, 1981 (Report from General Practice 19).
8. Royal College of Physicians of London. Smoking and health. London, Pitman Medical, 1977.
9. Wessex Positive Health Team. Prospects for prevention in Wessex. Wessex Regional Health Authority, 1982 (Lifeline Report No. 2).

10. Dennis, J. Prevention is possible if you try. *The health services*, 26 November 1982.
11. Wessex Positive Health Team. *Prevention of physical disablement: establishing priorities for Wessex*. Wessex Regional Health Authority, (in press) (Lifeline Report).
12. Catford, J.C. Positive health indicators: towards a new information base for health promotion. *Community medicine*, *5*: 125-132 (1983).
13. Catford, J.C. & Nutbeam, D. Use of positive health measures - the Wessex experience. *In*: *Measurement of health and health promotion: a positive approach*. Geneva, World Health Organization (in press).
14. Wessex Positive Health Team. *Filling gaps: dental health in Wessex*. Wessex Regional Health Authority, 1982 (Lifeline Report No. 3).
15. Player, D. Marketing health: the Scottish experience. *In*: *Progress in health promotion: UK and abroad*. Handbook of a 1982 Scientific Meeting of the Faculty of Community Medicine, 13/14 December 1982. Winchester, King Alfred's College, 1982 (Wessex Regional Health Authority, Lifeline Report No. 6).
16. Cliff, K.L. et al. Wessex Positive Health Team. Promoting the use of seatbelts. *British medical journal*, *281*: 1477-1478 (1980).
17. Wessex Positive Health Team. *Smoking prevention - Operation Smokestop: smoking cessation self help groups in Wessex*. Wessex Regional Health Authority, 1982 (Lifeline Report No. 5).
18. Department of Health and Social Security. *Care in action - a handbook of policies and priorities for the health and personal social services*. London, H.M. Stationery Office, 1981.
19. Kemp, N.H. et al. Smoking and cancer charities. *Lancet*, 6 November 1982, p. 1050.

GOVERNMENT ATTITUDES TO HEALTH EDUCATION: A CRUCIAL FACTOR IN EFFECTIVE ACTION[*]

by

Hakan Hellberg

Health education can be defined as dealing responsibly with information about health. Information always means power. In our societies we have set up governments to deal with power on behalf of the people. Against this background, government attitudes to health education are examined in this paper.

Effective health education requires not only positive government attitudes but active support through the provision of a legal and administrative framework supporting sound health behaviour. In other words, effective health education covering larger population groups is not possible without such government support.

The process towards health

The road towards better health is associated with a complicated process involving the interplay of many different forces. This process is only partly understood but we know enough to study it, to learn, and to apply what we learn in attempts to influence it.

Among the forces that have an impact on this process, we find different forms of community action, both through individuals and groups. There is social action of a more organized nature, for example through organizations of which there are many in the field of health education. Then there is also administrative and legal action in support of health education and health promotion.

All these forms of action for health imply a relationship to government attitudes and government action. But such action takes different forms depending on the circumstances. Certain forms of community action should be left to develop alone, the role of government being mainly to avoid unnecessary interference and to allow scope for community initiatives. This is true of certain spontaneous community actions that may even be questionable but should be allowed unless they are downright dangerous.

With regard to social action of a slightly more structured nature, active government support becomes important. It may be financial, and take the form of direct support of health education organizations through grants or through delegated tasks for which some financial support is provided. There may also be support in terms of government initiatives to promote coordination and cooperation among different organizations and between these and the authorities. In Finland, we have experience in all these forms of government support for nongovernmental agencies.

---

[*] This paper was presented at the Xth International Conference on Health Education, London, September 1979.

The strongest government role is related to administrative and legal action in support of health and healthy behaviour. Legislation has been described as "the formalized will of the people". This is something only government can do and it has here potentially powerful tools that need to be used wisely but also with determination if health education is to be effective. Properly developed administrative guidelines and legal action involving different forms of support for training programmes, financial grants, etc. are important elements of a supportive framework within which different forms of community and social action can thrive and be effective. It is not a question of choosing either community and social or legal action alone, but of their interrelationship, which in my opinion is most effective within a supportive and responsible legal framework. This requires responsible government action based on a correct understanding of and positive attitudes to health. It is thus not necessary to apologise for becoming political about health, but rather to apologise and atone for not doing so.

What is government?

What, then, do I mean by government? To me the most important form of government is local government - local authorities with real political power to carry out their responsibilities for the people in the local situation. Effective local government is participation from within through political elections and administrative processes such as I know them in Finland and the other Scandinavian countries. The primary responsibility for people's health rests, or should rest, with local government and this includes health education and health promotion. It is, of course, not possible to divorce local government from regional and national government, but the latter should play a supportive role for health-oriented action at the local level. One should consider representative government as a means of participation.

In most countries there is a strong emphasis on the central power of government, but of late there are also many examples of decentralization that are more than lip-service. My conviction is that such political decentralization has important health implications and is also a major aspect of government support of health education and health promotion. Again, I am not forgetting community and social action, but I see them functioning best within a supportive framework.

There are, of course, examples of irresponsible government action at the local level. Attitudes of self-sufficiency, self-righteousness, aloofness, etc. towards community action and voluntary organizations are unfortunately found here and there, but similar attitudes are not unknown among voluntary organizations and community groups either. Cooperation at the local level is a must and this can be facilitated from the national level both by government and the headquarters of voluntary agencies.

From government attitudes to government involvement

In order to have effective health promotion and health education there is a need to place these activities in proper perspective within the health care system. In most countries there is some movement away from an overemphasis on hospitals and medical care towards more effective and efficient forms of primary health care closer to the community and often related to community health centres of some kind. These channels are not yet used enough for health education, for which one needs to find a proper place in hospitals and health centres as part of health service development. This means concrete decisions concerning health plans and resource allocation for services, training programmes and research. In Finland we have included health education aims and objectives in our current five-year plan for the health services as well as in the reporting systems regularly used. In this way health education is an integrated part of the health services or is gradually becoming so through increased knowledge and experience.

But apart from medical care and primary care within the health system, we are today searching for factors conducive to a healthy life, to a higher quality of living, and for corresponding health elements for the population. This takes us away from the traditional health institutions and the traditional roles of health workers. These aspects of health promotion need consideration as part of the development of health policy by governments.

Health promotion means here looking with an open mind for the factors influencing health. This often takes us outside the traditional health field into other sectors of government such as social services, education, agriculture, industry, transport, etc. Most governments have only recently come to realize that other sectors than that of health influence the development of health policy.

The role of education in health promotion and the need for health education programmes in all schools is easily understood. The same may be true of certain aspects of accident prevention, food production and processing or the need for recreation and exercise. But discussion about healthy or unhealthy foods - milk fat, butter and fatty acids, food prices and production quotas - leads rapidly to a more heated debate with growing political implications. It is not readily accepted as yet that such discussion, debate and decisions are part of responsible government attitudes towards the health of citizens.

If agricultural policy and food prices can lead to heated discussions, the conflict between traditional fiscal policies and health concerns really tests government attitudes towards health, health promotion and health education, and the development of health policy. There is a long tradition of fiscal arrangements regarding alcohol, tobacco, sugar and some other products. To change such fiscal practices on the basis of health arguments requires information and hard data that we do not always possess today or that appear in a form that is not always convincing enough to the representatives of finance departments, or of industry and commerce.

Governments, i.e. cabinets and ministries, tend to be more progressive with regard to health promotion when policy issues are presented to parliament. But within the administration and bureaucracies the traditional fiscal interests tend to carry the day over health concerns. When powerful lobbies lose in parliament they still continue to influence government structures to which they have been traditionally related through common fiscal concerns. This in my opinion does not represent responsible government.

In most countries one still has to define the role of the health sector concerning health and health policy-related developments within other government sectors. The health portfolio is generally not one of the heaviest and initiatives generated within the health sector are often looked upon by other departments as interference that is less than legitimate. It is nevertheless difficult not to see a role for the health sector with regard to policy developments in other sectors. At least the health sector has the responsibility of sharing information about health and disease, about risk factors and about possible interventions and relevant cost-benefit data with other appropriate sectors. Preferably there should also be a role for the health sector as a partner, consultant or adviser, when it comes to health-related policy development in other sectors. For this to come true requires either joint cabinet decisions or a strong head of government. The multiple reasons for health or unhealth demand multiple interventions within different sectors of society and within government. This again requires cooperation and coordination at the highest level.

Government attitudes and responsibility towards voluntary agencies

At the beginning of this paper it was stated that there is a government responsibility to provide an administrative and legislative framework that is supportive of community and social action. The authorities need to clearly state that voluntary organizations have often pioneered in the areas of health promotion and health education. Nongovernmental agencies are also more used than government to serving the community on its terms, while health authorities are mostly used to meeting people on their own grounds, i.e. hospitals and health centres, where they develop the rules.

In the development of public policy on health and health promotion there is a definite role, but one of a different kind, for voluntary agencies. The same is true about the implementation of such policy. The role of government is firstly to accept this, and secondly to accept a large part of responsibility in making such participation possible.

But in this sphere even progressive and open government representatives often encounter difficulties. These are related to the nature of voluntary agencies which differ in size, emphasis, traditions, organizational models, quality of leadership, available resources, etc. Sometimes these difficulties lead to isolation on the part of the government and to a lack of regular contacts with these agencies.

Overcoming such difficulties requires action both from government and the agencies. Government representatives need to accept both the diversity among voluntary agencies and also responsibility for developing models of coordination and cooperation for which government initiative may sometimes be crucial. The agencies and organizations, on the other hand, need to make efforts towards coordination and cooperation among themselves in order to facilitate the relationship with the authorities. Models of financial support provided by the government within the framework of certain guidelines and jointly developed priorities seem to be a tool that could be used to improve relationships as well as joint efforts.

Some reasons for government attitudes and involvement

Total noninvolvement of government in health education is impossible. We have already created a complex society of interrelated factors and interests that have a direct influence on the health of the people. Factors influencing disease and health have multiple roots and the intersectoral nature of the process towards better health is becoming clearer and clearer. Coordinated action requires government involvement, and the responsibility to provide legal and administrative support lies with government. We are beyond the point of no return and government passivity concerning health risks and health promotion may be considered as political irresponsibility.

There is a government responsibility in health promotion and health education because of the recognized risks that have been identified. The decision-makers have to be prepared to take action based on such risks. Firstly, they must be emotionallly prepared for the social consequences of action or non-action. But they also need to be rationally prepared for the economic consequences of action or non-action. This process of maturing consensus may take a long time before it bears fruit in the form of legal and administrative measures. It is also necessary to learn to deal with power in this field: there are strong forces working against health in the form of economic interests and sales promotion. But there are also powers working for health, as well as the power of health itself.

Government has a political responsibility to share with the entire population information about health and the health consequences of certain practices and behaviour. That is why it is impossible to accept the argument that government should leave it to the citizens to find the relevant information and then act on it. Because certain population groups have easier access to information and are more used to turning knowledge into action, there would be unjust developments without a certain definite and determined involvement by government. Government has a moral responsibility towards high-risk groups that are unaware of the risks and the consequences of unchanged behaviour. In addition, social justice constitutes a health value in itself.

Government also has a financial responsibility to develop a policy for health promotion. The degree of joint financing through taxes means that non-smokers, non-drinkers and those who live a healthier life are carrying the burden of the results of unhealthy behaviour that remains unchanged.

The authorities are also in a strong position to deal responsibly with the power inherent in the available information about health questions. It is possible to accuse government of neglect if it does not act on available information that might avoid unnecessary risks or improve the health status and the quality of life of the citizens. This is the case with major public health problems that are amenable to promotive and preventive action, including price policy and legislation.

Government involvement in health is nothing new. In the fields of immunization, food hygiene, water and sanitation or traffic safety, such involvement is already an old tradition. Legal action for health is nothing new either. It only takes different forms because of new and different information. More conscious development of health policy is also a sign of maturing and development.

The reactions to action in health promotion and health education are sometimes surprisingly inconsistent. When we warn about the risks of salmonella or cholera, this is acceptable as "teaching". But when the warnings concern the much greater risks related to tobacco and alcohol we are accused of "preaching".

The process of preparing government action, e.g. legislation on smoking and health, has been shown to have an educational and behaviour-changing effect already at the stage of drafting the legal texts and even before their implementation. Legal action serves as an educational device. This was obvious in Finland during the two years preceding the adoption of the present act on smoking and health.

Conclusion

A process towards better health requires efforts to develop and implement concrete health policies. In this process government attitudes, responsibility and action play an important role. This is true not only of the health sector but increasingly of other sectors including those that traditionally have been concerned only with fiscal policy and products such as alcohol, tobacco and certain food items. Health-oriented policy expressed in legislation and administrative action provides an essential and sometimes even crucial framework for community and social action for health.

THE EXCEPTIONAL POTENTIAL IN EACH PRIMARY CARE CONSULTATION[a]

by

N.C. Stott & R.H. Davis

Introduction

"Comprehensive primary care" is an attractive concept with a growing descriptive literature but the principles involved are still difficult to present in a succint and practical way. Even the students who appear to have understood the principles of comprehensive care often fail to apply them in the consulting room, and the five "areas" described by the Royal College of General Practitioners (1) provide a conceptual framework of the content of primary care rather than an aid to individual patient care which can be applied simply and quickly. A rift still exists between our understanding of the theory and practice of primary care and this has serious implications for teachers, patients and students.

What appears to us to be missing is an acceptable concept of the practical potential in every single consultation in primary care which can be easily memorized, understood and used. The basis of such a concept should be intimately related to the decisions which can face every primary care physician, whatever his/her educational background and within whatever system of care he/she operates.

We present such a clinical framework which is designed to reveal the practical potential in each doctor/patient contact by highlighting four large areas, each of which embraces many skills which the primary clinician can use to his/her patient's benefit. The junior undergraduate can be expected to learn the basic outline, which is subsequently elaborated by the acquisition of appropriate knowledge, skills and maturity.

Postgraduates can also be encouraged to consider the clinical decisions they take in every consultation against the framework because it clarifies the practical implications of many of the concepts and ideas which have been described by the Royal College of General Practitioners (1) and by the Leeuwenhorst Working Party of European Practitioners (2) in 1974. The objectives of the framework are:

1. To provide a theoretical base from which a practitioner can develop the full potential in any primary care consultation.

2. To highlight some unique features of good primary care.

---

[a] This article was published in the Journal of the Royal College of General Practitioners, 29: 201-205 (1979).

3. To provide a basis for teaching in primary care which is simple enough for the undergraduate but equally valid for the postgraduate when more detailed knowledge and skills are included in the same basic structure.

4. To allow the philosophy, principles and research achievements in comprehensive care to be discussed within a simple patient-centred framework.

The clinical framework shown in Fig. 1 is another classification of knowledge, skills and attitudes. It is used to reveal potential skills which can be used in each doctor/patient contact and to be complementary to existing classifications of the content of primary care.

Fig. 1. The potential in each primary care consultation - an *aide-mémoire*

A	B
Management of presenting problems	Modification of help-seeking behviours
C	D
Management of continuing problems	Opportunistic health promotion

Use of the clinical framework

Realization of the full potential in each consultation depends on the clinician's ability to communicate with his/her patients and on the organization of the primary care services (3,4). No clinical framework can be a fully successful *aide-mémoire* if either of these general aspects of the primary physician's work is impaired.

The skill of active listening is much more than conventional history taking and it is appropriate that primary care is becoming the laboratory of many who have the vision to research into and teach interview skills (5-7).

However, primary health achievements are also partly dependent on individuals or agencies other than the doctor, and the World Health Organization is showing growing interest in innovative community health projects which have demonstrated that effective teamwork between clinicians, paramedical workers and lay leaders can create new potential for health promotion (8,9). This widening of the primary care role is still little evaluated but it is probable that the primary consultation will become an important motivating instrument towards schemes which can be organized by the lay public, or by other professionals, and which operate beyond the confines of the clinic (10).

Our framework (Fig. 1) deals with the clinician's potential actions, and comprehensive care is a blend of the four interrelating areas A, B, C and D. This allocation of letters to the four areas aids recall and provides a convenient shorthand, but in this presentation A and C will be discussed first and B discussed last to avoid repetition which would otherwise be necessary.

Areas A and C: the management of presenting and continuing problems

At the centre of every consultation is the patients' problem or problems which have been brought to the clinician and most medical time is spent dealing with these presenting problems (Area A). Indeed, most traditional clinical teaching is focused on the diagnostic and therapeutic processes and the evolving discipline of primary care has emphasized the importance of combining clinical acumen with insight into human behaviour and development in the comprehensive assessment of patients' problems (1). The integrated physical and psychosocial formulation is relevant to every specialty, but it is exceptionally important in primary care because techniques which are increasingly used by the trained family doctor depend on this widening of the diagnostic process.

The systematic supervision of continuing problems (Area C) has never been as attractive as Area A, but the increase in chronic disease and the remarkable efficacy of some medical treatments have forced clinicians into their present position of having to treat and monitor diseases which can persist for many decades.

At every consultation the primary care worker has to ask himself the question: what continuing problems are there to be dealt with while the patient is with me? For example, a four-year-old girl with a past history of a squint presents to the general practitioner because she has earache. She has been seen only twice for minor ailments during the past three years. The doctor may deal with the acute otitis media alone (Area A) or take the opportunity to review or arrange to review the child's vision, even though her mother did not come to the doctor with this in mind (Area C).

The importance of primary care workers being willing to think in continuity terms (Area C) has to be stressed repeatedly, because many students and young doctors find it irksome to widen the consultation deliberately from the presenting problems (Area A) to the often asymptomatic continuing problems (Area C). It demands a more comprehensive view of the patient and it can be time-consuming, so the time allocated for each consultation can have an influence on how successfully Area C is practised.

In the affluent nations there has been an attempt to develop computer recall systems to guarantee continuity of care for conditions such as hypothyroidism. Elegant as these systems are, they can cater only for a fraction of the problems requiring the clinician to be aware of Area C in every consultation. Other conditions which often exemplify this principle are: hypertension, anaemia, contraception, psychosexual problems, deafness following recurrent ear infections, antenatal care in the poor attender, and indeed any patient who is on regular therapy (repeat prescriptions). In the United Kingdom, where the average general practitioner sees 90% of his/her patients every three years, the potential for unobtrusive attention to the continuing causes of disability is enormous, and proper use of the primary care team will make this process even more efficient.

Knowledge of the family and its environment is often helpful when forming management plans for continuing problems, and the most obvious tool to help skill in applied continuity is a good medical record; but even in the absence of a record, the clinician who has been trained to be aware that continuity is necessary to deal with some clinical problems will use time, investigation, prescribing and referral more appropriately.

High-risk groups are those who suffer hardship through discontinuity or who enjoy using discontinuity of care to gain drugs or episodic attention. It is too easy to treat each presenting problem but to fail to perceive the manipulations or cries for help which lie behind successive acute episodes of minor illness. The existence of a personal doctor does not necessarily provide continuing care because he/she too can be deaf to what the patient is saying, or fail to recognize the signs revealed by the medical record, or be blind to how much is hidden by a lack of records in a clinic which is too busy for methodical record keeping.

Sometimes continuity of care breaks down because of excessive demand, patient numbers, population mobility, shared care or poor organization. The appropriate strategy to overcome these problems will vary from place to place although it seems likely that additional time per patient and improved skills in primary care will need to be coupled to a review of the clinic or practice organization. This review will often lead to improvement of medical records and greater use of ancillary staff to reduce the load on clinicians (11,12).

Area D: opportunistic health promotion

One of the most exiting and controversial components of every consultation is the opportunity it provides for both the promotion of healthy lifestyles and early or presymptomatic diagnosis The former extends the traditional content of the illness interview to include helping the patient to identify one or more aspects of his/her lifestyle which could be changed in the interests of better adaptation to his/her environment before disease develops; for example, dietary changes, appropriate exercise, attitudes to interpersonal relationships, or habit modification. The latter embraces the vexed question of presymptomatic diagnosis and treatment in patients who attend the clinician for some other reason, and educationalists face a challenge to decide which diagnosis procedures are justified by their outcome (1). For example, blood pressure measurement in the 40-and-over age group.

Modern understanding of disease pathogenesis has shown that many of the current major causes of morbidity and mortality have their origins in the lifestyle of individuals. Every student of medicine should appreciate the unique potential of the illness interview for health promotion because the patient and relatives are often very receptive to advice from the doctor or nurse at this time (10,13-15). Furthermore, methods which involve individual teaching (one-to-one discussion) are widely recognized as the most successful strategies in producing health-related behavioural changes (16).

There is also abundant evidence that future improvements in the major causes of mortality and morbidity in most parts of the world are more likely to come through modification of personal lifestyle than through legislation (17-19).

Unfortunately, many doctors, largely as a result of their training, are reluctant to use their influence to encourage health promoting behaviour in the absence of disease whereas they have no difficulty in offering advice about diet, exercise, habits or relationships once a diagnosis has been made which can be attributed to illness inducing behaviour and when it is often too late for the behaviour change to be effective. A caring profession should not withhold its knowledge and influence to help patients make appropriate lifestyle choices if this will reduce the likelihood of later ill health.

However, the objective of Area D can be only to ensure that the patient leaves better able to make informed choices. The clinician can try to develop methods which help the patient to grasp the practical issues but he/she should not allow the patient's response to modify his/her caring role in future disease episodes. This implies mutual adult respect and a change of the traditional attitude towards patients who reject the advice proferred by the physician.

The application of Area D to every consultation will involve the question: is it appropriate to try to help this patient to modify his/her lifestyle in the interests of long-term health? When the answer is in the affirmative the clinician can be assured that he/she is well placed to use his/her influence by advice alone, but other strategies may enhance the likelihood of practical acceptance.

The well organized "referral chain" extending outwards into the local community from the initial motivation by doctor or nurse is an example of a wider technique to help the patients step from "knowledge" to "behaviour change" (10), and self-help groups or clubs can also be utilized if informed leadership exists locally. Much more research is needed into Area D methods, but the principles which have undergirded the development of a "referral chain" into the community merit careful consideration by more affluent societies.

Area B: modification of help-seeking behaviour

Area B embodies the assumption that each consultation may in some way influence the patient's future help-seeking behaviour and that recognition of this fact should lead to better patient care. The most straightforward illustration of this principle is Marsh's (20) demonstration that a practice policy to stop prescribing for minor ailments coupled to a programme of patient education will lead to a lower demand for medical care for such illnesses. The incidence of coryza is not changed but the expectation for medical treatment may be altered, and patients can begin to be more realistic about what doctors can or cannot treat effectively.

In the United Kingdom the implications of the medicalization of many social and trivial problems has been provocatively presented in The Health Care Dilemma in which the Office of Health Economics (21) calls for a fresh philosophy and attitude towards ill health in the population. Similar views have been expressed by Crombie (22), Illich (23) and others and illustrate the rapid evolution of the theory and practice of Area B. However, consideration of the clinician's role in determining help-seeking behaviour embodies both inappropriate underuse of medical services and their overuse.

An objective of the framework in Fig. 1 is to highlight the need for every clinician to consider whether his/her management plans take cognisance of future help-seeking behaviour. Kaolin for diarrhoea, antihistamines for colds, codeine for coughs, or aspirin for aches... each is sometimes justified, but each is much more than a symptomatic prescription; it is also a ticket to reinforce the patient's belief that the doctor has a solution for such minor ailments. Thus patients' expectations are set and the waiting-room becomes so full that the practitioner has little time to explain what he/she is treating, or to ensure that the child with a urinary infection is adequately followed up, or the woman with a recurring dysuria has a proper psychosexual history taken, or that the child with iron deficiency anaemia or kwashiorkor is perceived as the clear indicator to a need for nutrition education in the home rather than a problem which can be cured relatively easily by traditional methods.

In Africa the phrase "the revolving door of malnutrition" has been coined to describe the failure of traditional medical services to overcome the high incidence of recurrent malnutrition because children are healed in hospitals and returned to the social conditions which caused their illness initially. A comprehensive sociomedical approach has been shown to stop the revolving door in Africa (10), and so similar principles may be worth serious consideration to slow the revolving doors of the health care dilemma in the United Kingdom. Our experience suggests that we will be one step nearer to that objective if for every patient seen the doctor asks himself/herself: what influence have I had on the future help-seeking behaviour of this patient and his/her family? When that question is posed thousands of times every day, primary care workers will probably begin to identify that they need fresh strategies which involve reaching out into the community, not just in terms of home visits as suggested by Pereira Gray (24) but, more importantly, in terms of the establishment of realistic attitudes to the physical, mental, social and spiritual development of our patients and their families. A major task ahead for the personal community health services is to give greater recognition to the methods which will encourage the realization of this potential and to have more insight into the activities which erode it.

Discussion

The framework described in this paper is complementary to existing analyses of the content of primary care, because it starts from the decisions and actions a doctor takes, rather than the underlying educational concepts or methods. This essentially practical approach is an extremely useful teaching aid because it widens the scope of every consultation by encouraging the clinician to consider the patient in a broad and practical way. One effect of this process is a growing awareness in the doctor of the limitations of short-term clinical solutions to many problems - particularly those that have their origin in human expectations and behaviour. For example, a young child with a dietary iron deficiency anaemia can be treated by giving iron therapy and diet advice (the traditional approach). However, as this anaemia is the product of faulty feeding habits, the family can learn more about the relationship between food and health by bringing their child back to health with judicious food choices alone. Furthermore, the child is less likely to become anaemic again if practical information rather than prescriptions are issued by the clinic (Area B).

The wisdom of this comprehensive approach extends well beyond the child's management because the process of maternal diet education has a potential impact on the whole family, by shifting the emphasis from a medicine bottle to food choices. The growth and development of siblings, grandmother's constipation, and perhaps even parental ischaemic heart disease risk factors could be modified by the skilled use of this child's consultation to motivate the mother to consider new food choices (Area D). Field experiments have shown that even semi-literate communities can benefit greatly from this approach if practical demonstrations of appropriate food choices and food preparations are developed to support the clinician's initial explanations to the patient (10).

An alternative strategy to prescribing is equally necessary to help many patients with problems involving anxiety, unhappiness, dyspepsia, loneliness, self-destructive habits, family conflict and other common disorders. However, the example of the child with anaemia given above illustrates principles which may be difficult for the average practitioner to implement because he/she lacks the support of a nutrition education unit which has proved so successful in Africa. He/she may also be limited in his/her knowledge of alternative strategies and by the time he/she has with each patient. The goal of patient education may be unattainable without paramedical or lay support.

Nevertheless, the primary physician has an unequalled opportunity to balance long-term health needs against short-term clinical pressures. He/she can practise from a broad clinical base by integrating the psychosocial and biological components of each illness (Area A). He/she can implement applied continuity of care to a defined population by learning to use the skills and aids which are required to achieve this (Area C). He/she can also make maximum use of the opportunities for health promotion (Area D) and thereby begin to discover the need to modify the traditional clinical approach. Finally, he/she can permit his/her growing knowledge and skills in the modification of help-seeking behaviour (Area B) to influence his/her clinical decisions, his/her practice organization, and his/her relationship with his/her patients. The larger number of patients coming to primary care, the nature of their problems, and the relationship they may have with their doctor - all reinforce these opportunities in a way not usually possible for other specialties.

Clinicians who feel nihilistic about Areas B and D are usually unwilling to concede that comprehensive care works on a much longer time-scale than traditional medicine and that our understanding of this young discipline is leading towards greater recognition for the need to have major reorientation of our primary clinics and the relationship they can have with the community.

We have much to learn and test about the way in which we organize primary care and the relative emphasis placed on the four areas in Fig. 1 will vary according to the availability of skills and resources; for example, in underdeveloped parts of the world, with severe under-doctoring, it is appropriate that the curative services should be seen mainly as a spearhead to primary prevention, although this is seldom achieved.

A nation's ability to afford an expensive curative medical service does not, however, guarantee a comprehensive approach, because episodic care remains more common than continuing care, and reluctance to ask the questions of Area B is as common as destructive negativism to Area D, often because medical education and clinic organization have lacked these qualities and secondary care has dominated health service planning.

We believe that the potential in every consultation should be taught to undergraduates and postgraduates, so the next generation of doctors will begin to expect the skills and structures required to carry the special responsibilities of each primary care consultation and then organize their services accordingly.

This framework is intended to be an *aide-mémoire* which encourages the primary physician never to forget the potential of each consultation, even if he/she cannot realize it fully owing to personal or organizational restraints.

REFERENCES

1. Royal College of General Practitioners. The future general practitioner - learning and teaching. London, British Medical Journal, 1972.
2. Leeuwenhorst Working Party. The work of the general practitioner. Statement by a working party appointed by the Second European Conference on the Teaching of General Practice, 1974. Journal of the Royal College of General Practitioners, 27: 117 (1977).
3. Zola, I.K. Pathways to the doctor - from person to patient. Social science and medicine, 7: 677-689 (1973).
4. Doyle, B.J. & Ware, J.E. Physician conduct and other factors that affect consumer satisfaction with medical care. Journal of medical education, 52: 793-801 (1977).
5. Byrne, P.S. & Long, B.E.L. Doctors talking to patients. London, H.M. Stationery Office, 1976.
6. Verby, J.E. The audiovisual interview. Journal of the American Medical Association, 236: 2413-2414 (1976).
7. Alexander, D.A. et al. Medical students talking to patients. Medical education, 11: 390-393 (1977).
8. Newell, K.W. Health by the people. Geneva, World Health Organization, 1975.
9. Barr, A. & Logan, R.F.L. Policy alternatives for resource allocation. Lancet, 1: 994-996 (1977).
10. Stott, H.H. The Valley Trust sociomedical project for the promotion of health in a less developed rural area. Thesis, University of Edinburgh, 1976.
11. Stott, N.C.H. & Davis, R.H. Clinical and administrative review in general practice. Journal of the Royal College of General Practitioners, 25: 888-896 (1975).
12. Marsh, G.N. & McNay, R.A. Team workload in an English general practice. British medical journal, 1: 315-318 (1974).
13. Russell, M.A.H. Cigarette dependence: doctor's role in management. British medical journal, 2: 393-395 (1971).
14. Truax, C.B. & Mitchell, K.M. In: Bergen, A. & Garfield, S., ed. Handbook of psychotherapy and behaviour change. New York, Wiley, 1971.
15. Eiser, R. In: Report on a workshop on health education in general practice. London, Health Education Council, 1977.
16. MacQueen, I.A.G. The challenge of health education today. Public Health, 89: 93-96 (1975).
17. Belloc, N.B. Relationship of health practices and mortality. Preventive medicine, 2: 67-81 (1973).
18. Committee on Child Health Services. Fit for the future. London, H.M. Stationery Office, 1976.
19. Department of Health and Social Security. Prevention and health: everybody's business. London, H.M.Stationery Office, 1976.
20. Marsh, G.N. 'Curing' minor illness in general practice. British medical journal, 2: 1267-1269 (1977).
21. Office of Health Economics. The health care dilemma, or 'Am I kranken, doctor?'. London, Office of Health Economics, 1975.
22. Crombie, D. In: Taylor, D., ed. Benefits and risks in medical care. London, Office of Health Economics, 1974.
23. Illich, I. Limits to medicine. Medical nemesis: The expropriation of health. London, Pelican, 1977.
24. Pereira Gray, D.J. Feeling at home. Journal of the Royal College of General Practitioners, 28: 6-17 (1977).

WELLNESS: AN EMERGING OPPORTUNITY FOR HEALTH EDUCATION*

by
Richard Petosa

In reviewing the recent history of health education, Hochbaum (1) has observed that the practice of health education has progressed through two distinct phases and is poised at the threshold of a new era. The first phase was characterized by efforts to disseminate accurate health information. It was assumed that this information would be sufficient to promote changes in personal lifestyles that would prevent disease. As these early efforts yielded disappointing results, a new era of health education began to emerge around 1950. Drawing upon the behavioural sciences, health educators began to implement interventions designed to address psychological and social factors that would influence personal health practices. While this shift towards psychosocial approaches has enhanced health education effectiveness, Hochbaum believes that the profession needs to expand its practice and begin to address the political, economic and social arenas that have impact on people's health actions.

As the processes of health education evolve, so do its goals. This paper forwards the thesis that health education is also on the threshold of a new era with respect to its goals. Developments in post-industrial societies have begun to raise standards of health beyond the absence of illness. The concept of high-level wellness as a model of optimal functioning is beginning to capture the imagination of the public and the attention of policy-makers. The purpose of this paper is to discuss the emergence of wellness as a policy issue, propose that wellness education is a field within health education, and examine some of the distinctions between wellness education and health education.

It has been observed at different periods in history that various cultures have accepted many diseases as acceptable and devote few resources to either the treatment or prevention of these diseases (2). As economic, technological and cultural factors evolve and simultaneously impact upon one another, particular diseases are singled out as unacceptable, resources are allocated and public health programmes are mounted to conquer human disease and suffering (3). This recurring cycle of events has led to the observation that the history of public health might well be written as a record of successive redefinings of the unacceptable (4). Public health historians often cite the miasma phase, bacteriology/communicable disease phase, health resources phase and the social engineering phase of public health as epochs characterized by significant shifts in what are defined as acceptable standards of health (5). While each of these epochs had unique features, all were aimed at the prevention and treatment of human disease.

---

* This article was published in Health education, October-November: 37-39 (1984).

Since the mid-1970s, a new phase of public health history has begun to take shape. This new era is marked by a renewed interest in preventing disease through modifications in personal lifestyles and by the emergence of wellness as a new goal for public health programmes. This focus on promoting wellness goes beyond the prevention and treatment of illness and as such represents a significant departure from past public health epochs. Wellness, a term defined decades earlier (6), has been mentioned with increased frequency, both in government policy statements and the professional literature of the allied health professions.

The report of the President's Committee on Health Education (7) served as an early indication of a movement towards a new emphasis in public health. A new perspective on the health of Canadians (8), a report filed by the Minister of National Health and Welfare, took a more comprehensive look at personal lifestyle and health status. The British Government released "Prevention and health: everybody's business" (9) along with a report by the Expenditure Committee on Preventive Medicine which detailed approaches to the economic analysis of curative and preventive health strategies. In 1976, a report entitled Health education in Europe (10) reviewed the health education policies and trends of 28 different countries. The United States Government soon followed with a series of documents including: the Forward plan for health (11); the task force report, Preventive medicine USA (12); the Surgeon General's report on health promotion and disease prevention entitled Healthy people (13); and Promoting health, preventing disease: objectives for the nation (14). Each of these documents emphasized personal lifestyle in maintaining health and discussed health in terms that went beyond the mere absence of disease. These emerging views of health set the stage for the emergence of wellness programmes.

The introduction of Healthy people, the Surgeon General's report on health promotion and disease prevention, states: "The health of the American people has never been better". Observations to support this claim are: infant mortality rates are at a record low, deaths due to heart disease and strokes are decreasing markedly, rates for stomach and cervical cancer are dropping, life expectancy rates are rising, and the rates of infectious and communicable disease have been dramatically reduced. Concurrently, the American people have also begun to take increased interest in and responsibility for their wellbeing. Social and political forces have also had an impact on the attitudes of many Americans concerned with feeling better and living more fully (15). These improved levels of health enjoyed by many Americans, combined with an increased concern for the quality of life, have challenged old assumptions about acceptable standards of health. Many people considered healthy actually do not possess a high quality of health. While they may not actually be ill, they do not enjoy a high level of wellbeing that allows them to live effective and enjoyable lives. Wellness programmes have evolved to promote increased levels of vitality and health that enable people to accomplish self-chosen tasks with a corresponding increase in their enjoyment of living. Green & Anderson (5) believe that "A high level of wellbeing in which an individual finds life stimulating is a realistic goal for citizens of every community".

Richard S. Schweiker (16), former Secretary of Health and Human Services, states that "We are breaking some new ground these days, and we are making wellness a cross-cutting theme at HHS ... building it into our programs and into our proposals for change". He concludes by proposing that Washington alone cannot promote wellness and suggests that we will need to get business and the allied health professions involved. The point is that the wellness concept is receiving a lot of lip-service these days. Further, it represents an opportunity to expand the boundaries of traditional health education.

Wellness is unique in focus

The wellness movement represents a significant departure from past public health epochs. Past phases of public health served as successive redefinings of the unacceptable. In contrast, the wellness movement strives to promote the acquisition of skills that promote "an integrated method of functioning which is oriented towards maximizing the potential of which the individual is capable within the environment where he is functioning" (6). This approach to promoting the health of the public represents a significant departure from medical or prevention-related goals. Conceptually, wellness has often been misconstrued as synonymous with the terms "health" and "prevention". This misuse of the term "wellness" is demonstrated by the inappropriate labelling of many traditional prevention and risk reduction programmes as wellness programmes. The loose and misguided use of the wellness concept set the stage for a wave of cynicism and mistrust by health educators who saw a new name for the same old package - prevention (17).

To make matters worse, many of these inappropriately named wellness programmes were being administered by self-proclaimed practitioners of questionable qualifications. Sechrist (18) proposes that the health education profession distance itself from wellness programmes to maintain credibility. An alternative view is that trained health educators could enhance the stature and quality of wellness programmes by getting involved in the design, implementation and evaluation of these efforts. The health education profession had developed a sizeable philosophical, research and educational infrastructure that could rapidly enhance the sophistication and credibility of wellness programmes. In fact, informed policy-makers may consider health education professionally obligated to contribute to the development of quality wellness programmes.

Wellness within health education

Wellness as a developing field can be considered as a type of health education which focuses on promoting positive health. The following definitions found in Healthy people (13) help shed light on a fundamental distinction between health education and wellness programmes. Disease prevention begins with a threat to health and seeks to protect as many people as possible from the harmful consequences of that threat. When personal behaviours are related to the prevention of a disease, health education is one potentially effective strategy. On the other hand, health promotion begins with people who are healthy and seeks to help them develop lifestyles that can maintain and enhance their state of wellbeing. High-level wellness can be considered the goal of health promotion programmes. As we begin to more fully appreciate the implications of these definitions, the philosophical differences between health education and wellness programmes should become clearer.

Wellness programmes have been discredited as "nothing new" and worse, "faddish and elitist". While health education and wellness programmes will hold much in common, there will be important differences. Following are some possible contrasts between traditional health education programmes and wellness programmes.

1. Health education tends to emphasize the prevention of somatic disease by influencing personal behaviour to reduce mortality and morbidity rates.

   Wellness programmes are primarily concerned with the quality of life, emphasizing the _experiential_ as well as the behavioural dimensions of humans.

2. Health education often seeks to reduce prevalence of specific behaviours, e.g. cigarette smoking.

   Wellness programmes recognize the multidimensional, holistic nature of human health. This orientation encourages wellness programmes to focus on lifestyle rather than risk factors and problem behaviours.

3. Health education is often problem-centred, focusing on "at risk" populations.

   Wellness programmes are not problem-centred, work with people that are not specifically at risk, and seek to facilitate further self-development and wellness.

4. Health education promotes behaviour change to prevent disease.

   Wellness programmes seek to promote lifestyle changes conducive to achieving high-level wellness.

5. Health education tends to focus on providing information and motivating people to make voluntary changes in behaviour conducive to health.

   Wellness programmes rely heavily on educational strategies but also use health promotion strategies which incorporate organizational, environmental and economic supports for behaviour conducive to high-level wellness.

While an effort has been made to emphasize the possible differences between health education and wellness programmes, it is important to note that many present-day programmes have evolved largely outside the health education field. Therefore, much of what is called wellness programming is very similar to contemporary, prevention-oriented, health education. Practitioners of wellness are often left to "reinvent the wheel" because they have not benefited from professional preparation in health education. It is suggested that the health education profession can contribute significantly to the wellness field, as well as benefit from the different approach to human health embodied in the wellness concept.

Indeed, there are indications within the health education literature which suggest that wellness may be gaining acceptance. In a review of articles published in _Health education_ between 1969-1979, Crase (19) observed that there has been a gradual shift from disease prevention to a more positive wellness/holistic orientation. The journal _Health values: achieving high level wellness_ (20), founded in 1976, also reflects a changing emphasis within health education. As Russell (21) studied the trends occurring within health education, he concluded that the profession will continue to move towards more positive/holistic models of health.

Recently the International Union for Health Education (22) took the initiative to forward the following policy resolution:

Recognizing that today the world's population is constantly seeking ways to improve its health status through better lifestyles and other related mechanisms and that those professions whose obligation has been to provide treatment for illness and disease have not been vigorously active in the prevention arena, the profession of health education should now be respected as the primary profession responsible for wellness and quality of life.

Their recommendation is based on the profession already having in place: a unique body of knowledge, extensive preparation programmes, a code of ethics, professional societies, and performance quality standards that make health educators the most highly qualified professionals who might be responsible for wellness programmes.

Wellness might best be characterized as a movement in search of a qualified profession. Much work needs to be done on philosophical, research and programme issues related to wellness. While health education will continue to serve an important role in the prevention of disease, the time is ripe for the profession to consider the wellness movement as an intriguing professional opportunity.

REFERENCES

1. Hochbaum, G. At the threshold of a new era. Health education, July/August: 2-4 (1976).
2. Hobson, W. World health and history. Baltimore, MD, Williams and Walkins Company, 1963.
3. History of American public health. American journal of public health, 55:1 (1965).
4. Vickers, S.G. Values systems and social processes. New York, Basic Books, 1968.
5. Green, L.W. & Anderson. Community health, 4th ed. St Louis, MO, C.V.Mosby Company, 1982.
6. Dunn, H. What high level wellness means. Canadian journal of public health, 50: 447-457 (1959).
7. The report of the President's Committee on Health Education. New York, Public Affairs Institute, 1973.
8. Lalonde, M. A new perspective on the health of Canadians, a working document. Ottawa, Government of Canada, 1974.
9. Great Britain Expenditures Committee. Preventive medicine. First report from the Expenditures Committee, 1976-77, London, 1977.
10. Kaplan, A. & Erlen, R. Health education in Europe, 2nd ed. International journal of health education, (1976).
11. Public Health Service. Forward plan for health. Washington, DC, 1976 (document FY 1978-82).
12. Preventive medicine USA: a task force report. New York, Prodist, 1976.
13. Healthy people. The Surgeon General's report on health promotion and disease prevention. Washington, DC, 1979 (OHEW(PAS) Publication No. 79-55071A).
14. Promoting health, preventing disease (1980): objectives for the nation. Washington, DC, Public Health Service, 1980.

15. *Family health in an era of stress: the General Mills American family report 1978-79*. Survey conducted by Yankelovich Skelly & White Inc.
16. Schweiker, R.S. Strategies for disease prevention and health promotion in the Department of Health and Human Services. *Public health reports*, *97*(3): 196-198 (1982).
17. Lewis, V.J. & Safian, N.S. Is health promotion the new fascism? *Networds: a journal of prevention* (Missouri Prevention Network), *1*: (1981).
18. Sechrist, W.C. Total wellness and holistic health: a bandwagon we cannot afford to jump onto. *Health education*, September/October: 27 (1979).
19. Crase, D. Ten years of health education. *Health education*, November/December: 11-12 (1981).
20. Neilson, E.A. Editorial. *Health values: achieving high level wellness*, *1*(1): 7 (1977).
21. Russell, R.D. Holistic health. *In*: Russell, R., ed. *Education for the '80s - health education*. Washington, National Education Association, 1981.
22. International Union for Health Education. *Policy resolution: primary and professional responsibility for wellness and quality of life*. 1981.

PARTICIPATION IN PRIMARY HEALTH CARE

by

Peter Pritchard

Why participate?

Imagine a primary health care unit run by patients. They would own the building, hire and fire the staff, and expect doctors, nurses and lay staff to take instructions from a patient-manager appointed by patients.

Most of us who work in primary health care (PHC) would regard this idea as absurd. How could the doctors' and nurses' knowledge and skills be properly deployed? How could illness be prevented, health improved, and medical and nursing needs met? Would not doctors and nurses become puppets, with the strings pulled by the more demanding and articulate patients?

Let us examine the opposite scenario - a practice in which the doctors own the premises, employ many of the staff, regard it as their job to run the business, and expect staff and patients to recognize this and comply with doctors' orders. Is this equally absurd? Or does it not have enough reality to make us question the way things are run at present?

The "doctor as boss" image applied in the old days of single-handed, Dr Finlay-style, practice, with no staff employed and general practitioners working in isolation and competition. Old habits take time to change, and it is difficult for doctors - ever mindful of their own overriding clinical responsibility for patients - to see their staff as partners. To extend this concept of partnership to include patients as well is even harder to accept.

Participative management

Modern management relies upon staff involvement and participation to bring out their skills and motivation. Staff need to feel appreciated and involved, and to be able not only to use their talents to the full, but to develop them.

Do not patients need to feel involved in their own health - both keeping healthy and getting well when they are ill? Do not patients need to feel a stake - even a pride - in their local primary care service? Would not patients welcome an opportunity to help doctors and staff to improve local health and community services for their mutual advantage?

These are the sort of questions which "Patient participation groups" (PPGs) address. Yet, ask a group of doctors who do not have a PPG what it might mean to them, and they reveal all sorts of fears about their most awkward patients controlling the practice and making their lives intolerable. These fantasies are soon dispelled once a dialogue gets going. Patients are delighted to be asked to contribute their ideas: doctors and staff are pleased by the very positive contribution which a PPG can make to the smooth and effective running of primary health care.

What do patient participation groups do?

By their very nature, PPGs focus on the problems which they and the doctors and staff see as important. This varies so much from area to area, and from one practice to another, that there is no blueprint for a standard PPG. Each is a uniquely responsive and adaptive device for communication leading to action. But PPGs do show some common activities and features. These are described below.

They help to shape the aims of the practice, so that some balance is achieved between the aims of the providers and of the users.

In my own practice a questionnaire was produced listing eight possible aims and the patient group was asked to put them in order of importance. The doctors and staff did the same. The discrepancies were striking (1).

They provide feedback for planning and evaluation of services.

This is a key area of activity - a listening post in the community. Two of the first three patient groups had this as their main aim. Many groups have undertaken projects to evaluate services, but giving an opportunity to patients to speak about how things run and for doctors and staff to listen is common to all groups.

They can call attention to the needs of certain groups of people in the practice who may be missing out.

There are many examples of this. Transport services, prescription collection services, postnatal support groups, luncheon clubs for the elderly, language classes and interpreters for ethnic minorities have all been organized. Having highlighted a problem area it is usual for the patient group to provide the remedy as well, with the agreement and support of the practice staff.

They use their links with other community agencies to improve the coordination of care.

The doctors and staff cannot have their fingers in every community pie. Most attenders at patient groups come as public-spirited citizens who may be active in other organizations. This enlarges the practice information base and brings them into community networks where they may find powerful allies.

They provide a forum for users and providers to grumble, to complain, or to praise.

Some groups invite suggestions and complaints at meetings or by questionnaire, some have a procedure for dealing with complaints in an independent and informal way and some have a representative patient in the waiting-room to observe at an early stage if any problems are developing.

They help with the development of programmes of prevention through health education which are thought to be appropriate to people's health beliefs and level of understanding.

Several groups have taken the initiative by running imaginative health education programmes on a community basis. Some have made films and videotapes for education in small groups and in the home.

They work jointly with the professional staff to promote health, not just treat sickness. For this they provide much of the energy, time and skill which is needed.

Numerous examples could be quoted where groups seek to promote a healthy lifestyle in the community by means such as keep-fit and slimming groups. Joint action by patients and professionals has a more powerful influence on the climate of opinion than either acting alone.

They can put pressure on outside bodies to maintain or improve services.

Patient groups have had several successes in which pressure has been put on health authorities to keep a hospital, clinic or ambulance depot open or to provide services such as chiropody in a health centre. A combined approach from patients and staff sometimes works when singly they have failed.

Advantages and snags

Many patients respond in a positive way when asked to join a patient group. The benefits of such a group can be summarized as: producing a better feeling between patients and doctors; relieving doctors' anxieties about the impact of change on the practice; giving everyone greater confidence in the service being provided; and releasing energy to improve and extend the service.

The advantages far outweigh the disadvantages and only a few groups have run into serious trouble. In a neighbourhood where other practices are competitive or suspicious, there may be complaints that a patient group is advertising, thus limiting the group's scope for action. Taken to its logical conclusion, it would be an offence for a patient in the bus queue to tell another that her doctor was good, or had pleasant premises, or gave a good service.

It has been shown that the doctors who started the early patient groups were moderately confident people. Those who oppose neighbouring groups may lack self-confidence and feel threatened by change. Once the concept becomes a normal part of general practice, these objections should vanish.

Another possible snag is the thought that a patient group will demand a lot of the doctor's time. From my own experience of a group which met for two to three hours three times a year, time was not a problem. Enthusiasm was needed to get it started, but once it was going, the patients' energy kept it running.

Some doctors feel that their lives will be made a misery by difficult and complaining patients taking over the group. This is not borne out by experience. The group is quite able to deal with any difficult members.

Many doctors favour having a patient group in their practice but do not know how to go about it. They are put off by the difficulties, real and imagined, of starting a group.

Further details of the activities of PPGs can be found in Paine (2).

PPGs and prevention of coronary heart disease (CHD)

Many groups give priority to health promotion and education and high on their list is the prevention of CHD. Methods used have been:

- arrangement of lectures on health, lifestyle and prevention of CHD;
- production and distribution of leaflets to patients;
- forming groups for stopping smoking, keeping fit, slimming, relieving stress;
- helping the practice publicise and arrange screening for hypertension and health checks;
- liaison with existing self-help groups (e.g. Familial Hypercholesterolaemia Association, Heart and Stroke Association).

A particularly successful project was undertaken at Bristol in which all male patients in the practice aged between 35 and 55 were circularized with the help of the PPG and invited to attend health education sessions about prevention of heart disease. Twenty-three per cent of the practice patients at risk came to the first session, and the enthusiasm has been maintained. (Women patients responded with similar enthusiasm to cervical cytology sessions.) The role of the PPG was to provide the energy and resources to circularize people and encourage them to attend. Invitations to attend can be made more attractive with the patients' help, and the take up can be doubled.

Where do PPGs stand today?

PPGs have been going since 1972 (3), but their development has been slow, and only about one practice in 10 has a group. However there is steady progress, and increasing support from the Royal College of General Practitioners and other bodies. Starting and maintaining a PPG is not easy, and requires enthusiasm and skills - both in communication and in management.

Starting a group

There are two main types of group, "open" and "nominated". Open groups are formed from open meetings which any patient may attend. Nominated groups are formed from representatives of other community groups and associations. The type of group chosen affects the manner in which it is formed: but when an attempt to form an open group fails, a nominated group is formed sometimes instead. Much discussion has taken place about which type is more representative or effective. What matters is that the group should be formed, should survive, and should do effective work in developing patient care services.

Open groups

There are five methods of starting an open group.

1. Postal questionnaire or circular. All adult patients or families in the practice may be asked for their suggestions about improving the way the practice runs, and be invited to an open meeting at which there will be a general discussion, and the election of a committee. This is an expensive

method in terms of postage, stationery and labour, and may produce a disappointingly small response from contented - or apathetic - patients. It is, however, seen to be democratic, and it does inform all patients about the group.

2. Handouts to patients. Reception staff can hand out leaflets to all patients attending the surgery or health centre for any purpose, over a period of 1-2 months, with an invitation to attend a meeting. This is a cheaper and easier method, and is biased towards those receiving medical care.

3. Start activities first. A popular method is to hold health education lectures for the whole community, which can be widely advertised on notice boards, and through local press and radio. Once established a committee of attenders can be elected to take over the running of the health education programme. From this committee, the patients of the practice concerned can be identified and asked to form the nucleus of a patient participation group. To this nucleus may be added nominees of groups of practice patients, for instance, attenders at child health, antenatal, hypertension or diabetic clinics.

4. Focus on one project. Sometimes chance plays a hand, with a group of patients coming forward suggesting that they raise money to buy equipment for the practice, or run a voluntary car service, or such-like. From this beginning, a group of motivated patients can arise, which can then be encouraged to widen its aims to become a more representative group.

5. Enlist the help of the Community Health Council (CHC). A CHC usually operates at district level on behalf of a population of about 250 000. In this population there are likely to be about 100 general practitioners, in 25-30 practices. The CHCs are usually interested in patient groups and can be very helpful. If a neighbouring practice is hostile to the starting of a group, the CHC can act as an intermediary. It can also get projects such as transport schemes going.

Nominated groups

There are two ways of starting such a group.

1. Involve all known community agencies. In some areas, people are reluctant to come to meetings, and get involved in yet another community agency. The nominated group may be the answer, and has worked well in very diverse circumstances from rural to deprived inner city practices. Some people argue that it is less democratic and less open, but these objections are not insuperable. What counts is that the group should engage people's interest and use their knowledge and energy to help the service to function effectively. At this stage, flexibility and variety must be the keynote.

The nominated patient group can tap a number of existing community networks, and so become known to a larger population than are likely to attend a patient group meeting. These linkages increase the information base of the group, and may increase the power base too. Research has shown that most group members attend as citizens rather than as patients, so it is natural that people who attend will already be active in the community in some way, and research confirms this. Some organizations, such as ethnic minorities and youth clubs, may be reluctant to nominate one of their number, in which case they may prefer to send a professional such as a community worker or a youth club organizer. They come as patient advocates, rather than as actual patients. In time the members of the minority or club may gain enough confidence to nominate their own representative. The aim is for the group to be as representative as possible of the community served by the practice.

2. Focus on one community group. In some places, such as a new town, there is often a very strong and effective community association which already has links with all the other networks, and has views about health care. Rather than set up a separate group, it is easier, as a first step, for the practice to establish a link with the community association and introduce health topics to their meetings and have debates about matching services to needs. Alternatively a nominee of the community association could attend practice or health centre meetings to represent the patients' interests. This can be a first stage on the road to development of an active group which not only brings health care ideas to the attention of the practice, but also helps to meet need from their own resources. In rural areas, or older towns, there may already be an organization particularly suited to a dialogue with the practice staff, which can act as a nucleus for further development.

Wider significance of patient participation

Participation is not just a device for giving an extra dimension to practice audit, or to encourage self-reliance so that doctors have less work to do. Participation is an essential ingredient for success in any organization, and it fulfils a basic human need for involvement and self-esteem. the obverse is alienation. Furthermore, doctors and professional staff are given privileges by society in return for the work they carry out. Two of these privileges are autonomy and authority: but in exchange, professionals must be accountable to patients, to authorities that administer health care and to society at large. But how can this be achieved? One important method at the primary health care level is to develop a relationship - not of giving and receiving care, not of doing things to people, but with people. In other words we can all try to work in a partnership for health.

REFERENCES

1. Pitchard, P. Manual of primary health care: its nature and organization. Oxford University Press, 1981, p. 17.
2. Paine, T. Survey of patient participation groups in the United Kingdom. British medical journal, 286: 768-772, 847-849 (1982).
3. Pritchard, P. Community participation in primary health care. British medical journal, 243: 583-584 (1975).

COMMUNITY HEALTH INITIATIVES AND THEIR RELATIONSHIP TO GENERAL PRACTICE[a]

by
Alison Watt

Introduction

A consideration of the implications for general practice of community health initiatives is timely on two accounts. First, it is now known that thousands of such initiatives exist in the United Kingdom. Second, the present government is showing increasing interest in the role of the voluntary sector in primary health care services.

Philanthropic societies have provided welfare services for hundreds of years, and, increasingly, voluntary organizations work alongside or within statutory services. Norfolk's Glaven District Caring Scheme, a non-qualified nursing service create by Dr Allibone to give support to a community care scheme, and Paignton's Karing, a project which uses volunteers to provide support and services for the housebound and the elderly (1), are examples of the many schemes which have been developed. The integration of volunteers or independently funded voluntary organizations with certain aspects of the provision of health services has introduced the concept of non-professional care to general practice.

A more recent development is that of patient participation groups. These groups meet for many reasons, but one common concern is to have a say in the decision-making processes that affect the service provided by their doctor or health centre (2). The emergence of patient participation groups demonstrates the willingness of many doctors to break from the traditional divide between the expert doctor and the non-expert patient. The two groups have much to offer each other, and doctors are being asked to take formal account of the services which patients feel should be provided by a practice.

Community health initiatives are a new element in voluntary sector activity in primary health care. A progression can be seen from the introduction of non-professional care, to accountability in delivery of care, to an attempt to exercise control over ill health produced by social factors. There is now considerable voluntary activity taking place within the community, which is neither alongside nor within general practice - 12 000 community health initiatives are known to exist in the United Kingdom.

---

[a] This article was published in the Journal of the Royal College of General Practitioners, 36: 72-73 (1986).

The community health movement

Community health initiatives fall into three broad categories: self-help groups, community health groups and community development health projects.

Self-help groups

In self-help groups, people who either suffer from a condition or are relatives of a sufferer meet together to give each other mutual support. They exchange experiences, methods of coping and sometimes campaign for better services and for ways of overcoming the stigma about a particular condition. There are two sorts of self-help groups: those where the members are sharing a condition that is relatively well provided for by the National Health Service (NHS) and those where it is not. This simple division determines to a large extent whether the group regards itself as a supplement to NHS care or as a challenge to it. The groups are often started by a sufferer or a relative and occasionally by a health worker, particularly if there is already a national organization for the condition. The groups often disappear as quickly as they emerge.

Community health groups

These groups are similar in origin and structure to self-help groups, with one important difference - the health concern that members share will be one that is regarded as being beyond the medical remit. Hence, while most physicians are now familiar with the importance of social factors to health, many do not regard poor housing, lack of safe play space, unemployment, and so on, as conditions that require a medical response. Hence, women on a housing estate who share a state of depression and who identify its cause as isolation, which in turn is caused by there being nowhere safe for their small children to pay, decide to treat the depression by campaigning for play space. The chances are that a general practitioner would not have done this, but neither would he/she have been likely to cure the depression.

Community development health projects

These are rather different as they are normally based within a neighbourhood rather than on an issue, and they will usually have one or more paid workers. Funding for such projects comes either from a statutory source, such as the local authority, or from a trust or foundation. The aims of each project vary, but there is a shared commitment to the principle that people should have a far greater say in the conditions in which they live and which affect their health including the nature and level of the statutory services provided. Community health workers, employed to work in such projects, assist people to decide collectively what their health needs are and to choose the appropriate action to attempt to get these needs met.

While community development health projects vary widely, one common element is the understanding that health is not an individual matter. Participants in community development health projects identify the causes of ill health in certain social factors over which individuals have little control (3-5). Indeed, the mutual support gained from the sharing of experiences and the subsequent lessening of the guilt associated with the illness of an individual are elements common to the community health movement as a whole and not only to community development health projects.

The majority of community heat initiatives are to be found in the voluntary sector and have little if any contact with their local primary health care services. Is there scope for useful links to be formed between these initiatives and general practitioners? As one would expect in a movement of this size, there is considerable diversity of opinion. Some initiatives argue for autonomy from the NHS, for fear of being taken over and "medicalized", while others argue in favour of working with, if not within, the NHS as a means of influencing the service provided. So while there is no blueprint for the relationship a sympathetic doctor might attempt to develop, there are a number of ways in which he or she can support community health initiatives if help is wanted.

How general practitioners can help

1. General practitioners can provide support by taking into consideration patients' experiences and perceptions of their health needs. The current professional definition of needs is often incomplete. Furthermore, a commitment to extending the concept of causality in ill health to the wider social context will ultimately be of value to doctors, as well as to their patients.

2. Most general practitioners have little, if any, knowledge of the extent of local informal health networks, yet could be extremely useful to these networks if they became familiar with them and subsequently referred patients them. The general practitioner should contact the local community health council, the council for voluntary service, the community action centre, the rural community council and any other generic organization, in order to make contact with local networks. Meetings with these organizations could result in contact with the less readily available initiatives. Doctors could then advertise community health initiatives in surgery waiting-rooms.

3. The doctor can then let it be known that he or she is willing to act as a resource for local health initiatives. Offering to give an informal talk on childhood illnesses or allergies, for example, is one way of developing useful relationships. Similarly, doctors who are responsible for trainees might recommend that trainees also involve themselves with the local health networks.

4. A general practitioner may be instrumental in starting up a community health initiative. Patient participation groups have already been discussed but more recently some doctors have introduced group consultations. So, for example, rather than see a large number of individuals with back pain over the course of a week, a group consultation for patients with back pain is held once a week. This initiates the process of mutual support among the patients and the doctor benefits from a collection of experiences. This group consultation may provide the impetus for a subsequent self-help group.

5. Having developed community health initiatives within a practice, the doctor may then wish to consult them to determine whether the practice facilities are adequate. Issues, such as toys for children to play with, a pram shed, receptionists trained to deal sensitively with patients and a cheerful waiting-room, may be raised. These issues can be dealt with simply and relatively cheaply.

6. The general practitioner could make surgery premises available, out of surgery hours, as meeting places for groups involved in health initiatives.

It can be seen that there are a number of ways in which general practitioners can support their local health networks. None of these proposals require substantial expenditure, yet if implemented they would provide a relevant service for patients and may even be cost-effective.

Conclusion

Privatization of certain aspects of primary health care could contribute to an erosion of collectivity in health. Increasingly, however, evidence indicates that ill health is caused by social factors. Any challenge to such factors must be collective to be appropriate or effective. Moves towards individualism - an inevitable side effect of privatization - will therefore be unhealthy.

Measures that counter individualism and take account of the social systems responsible for people's health experiences, knowledge and needs should be encouraged and reproduced. To this end, the provision of support and resources to community health initiatives by general practitioners will be one essential contribution.

REFERENCES

1. Green, P.A. Why not start a "Karing" group? Journal of the Royal College of General Practitioners, 33: 304 (1983).
2. Paine, T. Survey of patient participation groups in the United Kingdom: 1. British medical journal, 286: 768-771 (1983).
3. Department of Health and Social Security. Inequalities in health. Report of a research working group. London, H.M. Stationery Office, 1980.
4. Mitchell, J. Looking after ourselves: an individual responsibility? Royal Society of Health journal, 4: 169-173 (1982).
5. McKinley, J. A case for refocussing upstream: the political economy of illness. Proceedings of American Heart Association Conference: applying behavioural science to cardiovascular risk. Washington, 17-19 June 1974.

V. INTRODUCING SOCIAL, ECONOMIC AND POLITICAL CHANGE

THREE TYPES OF HEALTH EDUCATION[*]

by

Peter Draper, Jenny Griffiths, John Dennis & Jennie Popay

There are at least three types of health education. The first and most common is education about the body and how to look after it. The provision of information and advice on human biology and hygiene is vital for each new generation. The second is about health services - information about available services and the "sensible" use of health care resources. But the third, about the wider environment within which health choices are made, is relatively neglected. It is concerned with education about national, regional and local policies, which are too often devised and implemented without taking account of their consequences for health. This third type is part of the currently moribund public health tradition. At a time when many are trying to improve methods of health education at least equal attention should be paid to its content.

A typology of health education

An illustration might clarify these three different types of health education and what is meant by finding a balance between them.

The example concerns cycling. Type 1 health education would be concerned with helping the individual to cycle safely, from using clear hand signals to wearing easily visible clothing. From the perspective of promoting health (rather than preventing ill health) type 1 health education would deal with issues such as cycling and physical fitness and the associated sense of wellbeing. Type 2 might offer advice on, for example, what to do in an accident, or whether and how the older cyclist should seek a periodic medical examination.

Type 3 health education, on the other hand, would be concerned with public understanding of how to create a safe and healthy environment for cycling. It could cover the costs of building safe and attractive cycleways and the comparative costs of different forms of transport; the practicalities of designating certain roads (especially those leading to schools) as "cycle roads" and restricting vehicles; Dutch (and other extensive) experience of cycleways and traffic regulations that protect the cyclist; and education about the results of surveys indicating that a high proportion of people would cycle if it were made safer and more congenial (1) - and so on.

This example suggests that health education restricted to types 1 and 2 is partial to the point of being socially irresponsible. Social responsibility is not discharged merely by inculcating safer cycling habits - on lethal roads. On average, we kill 17-18 people a day on the roads, of whom, typically, one is a pedal cyclist (2). Education should also be concerned with developing a transport policy to allow cycling under sane conditions.

---

[*] This paper was issued in: British medical journal, August: 493-495 (1980).

Type 3 health education and health policy

The concept of type 3 health education is highly relevant to a wide range of policies (as opposed to an activity such as cycling) in which health issues are currently given scant regard - for instance, agricultural and food policies. Food consumption patterns are shaped by national and international policies apparently untouched by health considerations, such as prices and subsidies decided by the EEC or because of Cabinet concern for the balance of payments. Health educators could help people gain insight into the current restrictions in their choices about what they consume.

Transport is another area where a type 3 approach to health education would be valuable. Health educators could help local and national efforts to lower the overall need for transport (by, for example, encouraging greater local and regional self-sufficiency in goods and services). They could also inform people of the health implications of different patterns of transport, from relatively hazardous forms (such as motor vehicles and especially motorcycles) to safer and otherwise healthier methods, such as use of railways and waterways, cycling, and, not least, walking.

Agricultural, food, and transport policies are part of a much broader issue that should be of concern to health educators - the extent to which we live in a society that too often damages rather than promotes health. Many contemporary health problems result from what may reasonably be characterized as a religion - our preoccupation with economic growth. The serious and adverse health consequences of pursuing indiscriminate economic growth have been described extensively elsewhere (3,4); suffice it to say here that health education should, in the last analysis, contribute to developing a society based on an economy that promotes health and wellbeing rather than one that too often pursues "wealth" at the expense of health.

Health education in relation to tobacco smoking illustrates this. Without denying the valuable contributions of Action on Smoking and Health (ASH), the national health education organizations, the Royal College of Physicians, and the notable stand taken by Sir George Young, Parliamentary Under-Secretary for Health (5), there is still a gross imbalance between types 1 and 2 and type 3 education in relation to smoking. Insufficient attention is paid to what might be called the "tobacco-promoting environment". The common assumption is that the Government is too dependent on tax revenues from tobacco to take effective action against smoking, particularly at a time of economic recession and cuts in public expenditure. The public is rarely informed, however, that income from tobacco advertising is seen by some as being critically important for the survival of an advertising-dependent press. (Dr David Owen went on record, when Secretary of State for Health, as stating that this was the issue that prevented stronger action (6).)

Equally, much greater understanding is required about such issues as how far smoking acts as a tranquillizer in an over-pressured society and about means of reducing damaging stress; the use of tobacco as "one of the few pleasures in life"; the role of multinational companies and the possibilities for structural changes in tobacco firms and tobacconists (ranging from greater diversification to nationalization or municipalization); the pressures on politicians and civil servants.

How goods are produced, as well as what is produced, is also an important health issue. Many jobs damage health either directly (through exposure to chemicals, unsafe machines, and so on) or indirectly (through destructive stress or boredom). Furthermore, it is not commonly recognized that the experience of being out of work involuntarily may contribute to illness and death (7,8). The disabling effects of both unchosen unemployment and damaging employment can be solved only through changes in the organization and meaning of work and the creation of more socially useful employment that would, for example, tackle as a matter of urgency problems such as inadequate and badly insulated housing. The initiatives of the Lucas Aerospace Shop Stewards Combine in going over to health-promoting products (9) and the work of the Centre for Alternative Industrial and Technological Systems (10) show that this is not as Utopian as is commonly supposed.

Clearly, for individual health educators to stimulate and encourage change in the complex patterns of national policies is extremely difficult. National associations of health professionals and other groups could, however, have an important influence. Indeed, a few national associations to some extent already undertake activities of precisely this nature. A seminal report by the Council for the Education and Training of Health Visitors, for example, concluded that "... the health visiting profession has a responsibility to influence policies that affect health and in order to achieve this, health visitors will have to engage in political activity" (11). Such adult approaches to "politics" must be applauded and others encouraged. The reports of the Royal College of Physicians on smoking and the BMA's recent report on alcohol dependence are other illustrations. Professional associations could do much more to act as "type 3" educational groups.

Much of this section has been concerned with the need for type 3 health education about national policies. We must, however, mention a complementary version, particularly suited to local problems. This has been dubbed, by J. Hubley in a paper at the 10th International Conference on Health Education, September 1979, the "community development approach to health education". It has its roots both in developing countries and in the American "war on poverty" in the 'sixties. Some pioneering work in Scotland has suggested that it can have an impact in areas of multiple deprivation where types 1 and 2 health education have met with little success. The essence of this approach is that health educators enter into a dialogue with the community, encouraging its members to articulate their needs, and conveying skills and information to help them take action to overcome health and related social problems.

Also at the local level, health educators could direct a strong effort towards outdated nutritional practices within institutions, such as menus in schools, colleges, and hospitals. They could help to "make the healthier choices the easier choices" in such notorious trouble spots as school tuckshops, confectioners, and checkout points in supermarkets by, for example, encouraging the replacement of sweets by inexpensive fresh fruit and nuts. They could stimulate teachers in schools and colleges to teach sound nutritional principles and practices in "home economics" classes and thereby end much unwitting miseducation. Health educators could also help people to discover neglected but valuable foodstuffs, such as pulses and wholemeal products, including pasta.

Type 3 health education and the public health tradition

Type 3 health education is sensitive to the dynamic relationships of people with their environments. These ecological and political concerns place it firmly within the public health tradition. Indeed, "human ecology" is a contemporary synonym for public health. Some of the lessons to be learnt from the history of public health may reinforce the previous argument. The more important battles for public health (the battles to change the environment rather than individuals) have the following characteristics in common.

Firstly, public health is a "social change movement". The problem of sewage in drinking-water was not solved by ignoring the environment and appealing to individuals to boil their drinking-water. In contemporary terms, responsibilities for public health are not met simply by telling people to "look after themselves", to "adopt healthy lifestyles", and to "be responsible".

Secondly, precisely because public health is a social change movement, it tends to be opposed by all of the essentially conservative forces in society, from those deliberately preserving their financial interests - for example, the controllers of the transnational companies - to the majority of economists, whose guiding assumptions were formed in a world where oil was plentiful and pollution apparently peripheral. (The heads of most of our economists probably represent the most serious of Britain's problems with obsolete capital equipment. The difficulty, however, seems to be worldwide.)

On this subsidiary theme of the pervasive opposition to public health, we must refer to another form of health education increasingly common in both the western and Third Worlds, which might be called "pseudo-health education" (M. Daube, personal communication). This is the commercially sponsored educational material found everywhere from classrooms to hospital wards. It is issued by virtually every major company, marketing board, and council: Flora and the Milk Marketing Board are just two examples. The "free" or subsidized posters, leaflets, and other publications issued by such bodies have an air of neutrality, which may at least to some extent conceal the promotion of legitimate but different and frankly commercial interests.

Chadwick and others, in their attempts to provide clean drinking-water, were opposed not only by the city fathers and the civil engineers but by most doctors. Equally regrettably, the medical profession joined the churches in opposition to the birth control campaigners such as Annie Besant and Francis Place. Effective public health is never "conventional wisdom" but rather, as the Swedish director of health education is reported to have said, "raising hell to reach heaven" - constructive but peaceful social change for health.

Conclusion

Our argument has not strayed as far from a typology of health education as it may seem. The public health tradition appears moribund, the specialty of community medicine having largely become "illness service administration" (12). Nevertheless, "it is by no means too late for a change in direction" (13). The present context is a difficult one for type 3 health education but it may be ripe for change.

We are encouraged to note, for example, that the latest paper issued by HM Inspectorate on health education in the secondary school curriculum (14) recommends a balance between all three types. Content should "include knowledge and consideration ... [of] the structure of the human body, and its physical and emotional functions" (type 1); "social and medical services" (type 2); and "the influence of social and environmental factors on personal and community health before and after birth - for instance, quality of housing; opportunities for leisure; drugs; alcohol; smoking; pollution" (type 3).

Increasing attention is being paid to "developing more effective methods and ... monitoring and validating existing and new techniques" for health education (15). While more evaluation of how best to transmit "healthy" messages is welcome, it can distract from the careful scrutiny of what is being transmitted. Increased "effectiveness" can come from improving means of communication, but it currently seems more likely to result from changing the content and focus of education.

A discussion of such issues should address the equally important questions of whose job it is to undertake type 3 health education, who should provide the resources, and what forms of training are most appropriate. At a time when health professionals are under great pressure and not infrequently denigrated as "unproductive workers", careful thought needs to be given by all those concerned to the most effective means of organizing health education.

REFERENCES

1. Waldman, J.A. Cycling in towns: a quantitative investigation. London, Department of Transport, 1977 (LTRI working paper 3).
2. Central Statistical Office. Annual abstract of statistics. London, H.M. Stationery Office, 1977.
3. Unit for the Study of Health Policy. The NHS in the next 30 years. London, USHP, 1978.
4. Abel-Smith, B. & Leiserson, A. Poverty, development and health policy. Geneva, World Health Organization, 1978 (Public Health Papers, No. 69).
5. Young, G. Quoted in "Unforeseen attack on tobacco industry". Lancet, 1: 1415 (1979).
6. Unit for the Study of Health Policy. Health, the mass media and the National Health Service. London, USHP, 1977.
7. Brenner, M.H. Mortality and the national economy: a review, and the experience of England and Wales, 1936-76. Lancet, 2: 568 (1979).
8. Draper, P. et al. Micro-processors, macro-economic policy, and public health. Lancet, 1: 373-374 (1979).
9. Elliott, D. The Lucas Aerospace workers campaign. London, Fabian Society, 1977.
10. Centre for Alternative Industrial and Technological Systems (CAITS). Energy options and employment. North-east London Polytechnic, 1979.
11. Centre for the Education and Training of Health Visitors. An investigation into the principles of health visiting. London, CETHV, 1977.
12. Unit for the Study of Health Policy. Rethinking community medicine: towards a renaissance in public health? London, USHP, 1979.
13. Community medicine: a change in direction. British medical journal, 2: 3-4 (1979).
14. Health Education Committee of Her Majesty's Inspectorate. Curriculum 11-16: health education in the secondary school curriculum. London, H.M. Stationery Office, 1978 (working paper).
15. Royal Commission on the National Health Service. Report. London, H.M. Stationery Office, 1979 (Merrison report).

PERSON, SOCIETY AND PLANET:
THE CHANGING CONTEXT FOR HEALTH[*]

by

James Robertson

The context for health

What do we mean when we talk about "the context for health"? And how to we think of it as changing? Here are some items that appeared in the London "Observer" for Sunday 5 August 1984. This is one of the leading Sunday newspapers in Britain. It has no special interest in health questions. But all these items deal with aspects of health. They suggest how wide-ranging and potentially confusing is the subject of our discussion.

1. There is growing recognition that pressures of population growth are contributing to massive environmental degradation: destruction of the rain-forest, desertification, loss of habitat and wildlife, erosion, pollution, etc. In this conflict it is not only nature that suffers. In the end, man pays the price too, since a healthy environment is the basis of sustained productivity. In the end, the best contraceptive may be development. Historically, the demographic transition from high fertility/high mortality to low fertility/low mortality has occurred in countries where substantial economic progress has been made. (Report on UN International Conference on World Population, opening in Mexico City, 6 August 1984)

2. Mr Magdi Yacoub, the innovative heart transplant surgeon, last week defended his decision to give a new heart to a 10-day-old girl ... He said it was impossible to predict what the precise problems would be in giving a transplant to such a tiny baby. "When you are doing something that has never been done before, you are out there on your own."

3. In the 1970s, the average annual death toll in disasters, ranging from earthquakes to droughts, was 142 000. In the 1960s, it was only 22 500 ... Geological or climatic changes are not making Earth more dangerous ... Natural disruptions are acting as triggers which magnify political blunders that have caused worldwide poverty, over-population and environmental destruction ... The problem is particularly severe in the third world where, on average, there are 3000 deaths every disaster. In the West there are only 500.

4. The woman who last week became Britain's first surrogate mother is expected to hand over the baby to its parents today.

---

[*] This article was published in the Canadian journal of public health, 76 (Supp. 1): 12-18 (1985).

5. The end of the lawnmower is nigh. Scientists have developed ... a chemical compound which stunts the growth of grass without harming it ... It is also hoped that similar growth retardants can be developed for ornamental plants and trees. Scientists are working on a preparation to be injected into fruit trees in order to obviate the need for pruning. (Report on a new chemical called PP333.)

6. The Committee on the Medical Aspects of Food Policy ... recommended everyone to reduce their fat intake from 40% to 35% of total calorie consumption. But ... there is not the unanimity of medical opinion on that subject that there is on, say, smoking or obesity ... The layman will probably have to wait many more years for a definitive answer to the question: to what extent, and how much fat is dangerous? (Report on the medical controversy over fat.)

7. Happily, the French have not adopted the British favourite of Black Forest gateau to follow their steak. A healthy 43% favour fresh fruit ... Fast food may be making a quick takeover of ordinary French eating habits, but only 2% want to face hamburgers or pizzas on a night out. (Report of an opinion survey on French eating and drinking.)

8. The problem of alcohol abuse in Britain is enormous ... Local authorities are reluctant to give planning permission to large hostels housing vagrants and down-and-outs. The result is that more people are sleeping rough. When you think of the technology that takes us to the moon, you would think there would be a cure for alcoholism and all the suffering it causes. (Report on the death of a homeless alcoholic.)

9. Africa is suffering its greatest famine in living memory. In countless villages in East Africa and the Sahel - Ethiopia, Djibouti, Somalia, Kenya, Uganda, Sudan, Chad, Upper Volta, Mali, Mauritania, Senegal - there is no food or water. Even seed corn has been eaten. Thousands ... have already died. Millions face starvation now. (Advertisement for Famine in Africa Appeal.)

10. Britain's huge grain surplus this summer will provide ... a massive storage and funding problem ... and put further pressure on already-stretched financial resources and bulging warehouses. The Minister of Agriculture believes that the European Economic Community will find it difficult to dispose of surpluses. The rent bill alone for the current intervention stock is running at more than £20 million a year - effectively writing off the value of grain ... Arable farmers, criticized for felling trees, ripping up hedgerows, and draining marshes to make more room for lucrative grain crops, increased the areas planted with wheat and barley this year by 900 000 acres - despite warning forecasts that there would be a grain surplus. (Report on "Harvest that became a glut".)

11. The Scottish rail crash which killed 13 people last week may have occurred when a freak rocking motion toppled the train after it hit a bullock on the line at 80 m.p.h. ... Pressure is growing for the introduction of train radios to link drivers with signal box controllers. Such a radio could have been used to warn the crash driver that the bullock had been spotted earlier on the line. But a dispute between British Rail and the National Union of Railwaymen is preventing their introduction. (Report on Scottish rail crash.)

12. After a month of diplomatic ping-pong, it seems certain that American and Soviet delegates will not be sitting down together to discuss weapons in space ... The Americans were prepared to discuss the militarization of space,

while the Russians insisted on discussing the prevention of the militarization of space. That one word, and American reluctance to consider a moratorium on testing, was all that stood between them. (Diplomatic correspondent's report on "Star Wars Talks".)

13. With regard to that central economic and social issue of our time, unemployment, the implications are that in the United States, where it has fallen from nearly 12% to 7 1/2% in the past few years, "unemployment may not decline significantly further"; for Japan, where unemployment is 2 1/2%, there would be "little change"; for Europe, where the average level is 11%, it would go on rising. (Economics Editor commenting on the OECD's "Economic Outlook" for July 1984.)

Every single item there seems to me to be about some aspect of the context for health - the prospects for war and peace, natural disasters and their impact, the causes of accidents, the effects of maldevelopment and unemployment, scientific advances which may affect health, advances in medical technology, questions of diet, the effects of social stress. Some items suggest progress, i.e. that the context for health may be improving. Others clearly suggest a change for the worse. Others point to problems which must be tackled if the context for health is to improve. Taken together, they raise questions that touch directly on the Person (i.e. the lives of individual people), on Society (i.e. on relationships between people), and on the Planet (i.e. the way we treat the natural world in which we live, and of which we are a part).

However, those are just a haphazard collection of items, taken from one day's copy of one newspaper. They make no mention of some important changes in the context for health, such as ageing populations, or the economic limits now affecting the further development of health and welfare services, in many western countries. So how can we get some shape into our thinking about the context for health and the way it may be changing?

Three scenarios (or possible futures)

Table 1 outlines three possible futures, or scenarios, or paths of development, for industrialized countries, such as Canada or Britain: Business As Usual; Hyper-Expansionist (HE); and Sane, Humane and Ecological (SHE) (1).

As well as reflecting different possibilities, these scenarios also reflect different values. According to its own standpoint, each of the three takes an optimistic view of the future. The HE and SHE scenarios are, in fact, based on two powerful but opposing trends, evident in today's industrial societies. HE represents an accentuation of the dominant tendency to become more dependent on organization, technology and expertise, while SHE represents a change of direction in accordance with the emerging countertendency to emphasize personal values, self-help and local (family and community) mutual aid. Business As Usual assumes that, while these two opposing tendencies will no doubt continue to operate, neither will prove strong enough to change today's way of life very significantly.

More pessimistic scenarios can easily be drawn up. A disaster scenario and a decline scenario would assume that things will get worse - either by a sudden catastrophe or a steady deterioration. An authoritarian state scenario will assume that, as a response to things getting worse, the state will step in to take much firmer control of many aspects of life.

Table 1. Three possible futures

	Business-As-Usual	HE	SHE
Work	Full employment can be restored, and employment will remain the dominant form of work. Other activities (e.g. housework, family care, voluntary work) will continue to have lower status. Sharp distinctions will continue to exist between education for the young, work for adults, and retirement for the old; and between work and leisure.	Full employment will not be restored. All necessary work will be done by a skilled elite of professionals and experts, backed by automation, other capital-intensive technology, and specialist know-how. Others will not work. They will merely consume the goods and services provided by the working minority — including leisure, information and education services. Society will be split between workers and drones.	Full employment will not be restored. Work will be redefined to include many forms of useful and values activity in addition to paid employment. Paid and unpaid work will be shared around more equally, e.g. between men and women. Part-time employment will be common. Many different patterns of working will be possible, according to people's circumstances and preferences. Households and neighbourhoods will become recognised workplaces and centres of production. Young and old will have valued work roles. Work and leisure activities will overlap.
Money Incomes	Paid work will continue to be the primary source. Society will continue to provide a basic income to people who fall outside this norm, but such people, if of "working age", will continue to be stigmatised as exceptions.	The skilled working elite will be highly paid. Proponents of this scenario have not yet worked out through what channels everyone else will receive an income. From dividends, after nationalisation of all production? Or from benefits financed by high taxation? Or as wages from menial jobs?	Society will pay everyone a basic income as a right, enabling them to choose how they will divide their time between paid and unpaid activities. People who do not need this extra income because they earn more on top of it will have it taxed back automatically.
Economy	Economic growth can be restored. Creation of wealth by industry and commercial services can continue to support publicly financed social services. Industrialised economies will remain centralised, and big business and publicly owned corporations will retain their dominant role. Formal economic activity will continue to be the only kind that really matters, and informal economic activity will remain unimportant.	Economic growth will only be achieved by concentrating on high technology production and by marketing highly professionalised services. The wealth thereby created will meet society's needs. Formal economic activity will become even more dominant. Multinational business will have an even more dominant role.	The most important areas for economic growth and social progress will be in the informal economy. People's energies will be released to create wealth and welfare for themselves and one another in their own households, neighbourhoods and localities. The fact of so many people finding satisfactory occupation in this way will remove many existing obstacles to the efficient functioning of the formal economy. Within the formal economy, local small-scale enterprise will be the main growth sector. Localities will become more self-sufficient economically and less dependent on outside employers and suppliers.
Transport	Traffic and transport patterns will continue much as they are today.	A decline in travel between homes and places of work will be matched by a rise in travel for leisure.	A decline in travel between homes and places of work will only be partly matched by a rise in travel for leisure.
Energy	Patterns of energy use and energy development will continue much as at present. Changes will mainly be prompted by adjustment to price changes and the balance of supply and demand.	Demand for energy will continue to grow. Dependence on capital-intensive, centralised, high technology sources of energy (e.g. nuclear power) will grow. A few centres of energy production will supply the whole populace of energy consumers. A "hard" energy path will be followed. (2)	Less energy-intensive patterns of working, living and transport coupled with conservation and more efficient ways of using energy, will reduce demand for energy. Energy production will be more decentralised. There will be a tendency to greater energy self-sufficiency in regions and localities — and even, to some extent, in households where energy conservation, heat pumps, solar panels, etc., will reduce the need for energy brought in from outside. A "soft" energy path will be followed (2).
Technology	New technologies will continue to be developed for their own sake, because scientists and design engineers find them challenging, and because industries and governments hope they will prove profitable and that people can be persuaded to use them. There will also continue to be opposition to many new technologies on the grounds that they may be dangerous, exploitative, wasteful, polluting and socially undesirable or unnecessary.	Even more effort and resources than at present will be channelled into the development of new technologies. It will be accepted that all problems have technical solutions, and that top priority should always be given to the technical approach, including the development of new forms of expertise and reliance on the decisions and advice of experts. Opposition to this approach will become weaker. Technology will be master.	The development and diffusion of certain types of new technologies and new skills will have high priority. These will be technologies and skills which enhance the capacities of people to do more for themselves and one another, and reduce their dependence on outside systems, organisations and professional expertise. In particular, small-scale (including microprocessor) technologies will greatly expand people's capacities to work for themselves and one another in their own homes and localities. This scenario is not antitechnology. Technology will have an important role, but as servant.
Education and Learning	As at present, education will take place in educational institutions at the hands of professional educators. It will continue to be primarily for young people, before they enter the age bracket in which they will be expected to have a full-time job. Its main aims will be to provide them with the credentials to get and hold down a job, and to socialise them into what will remain a mass-employment, mass-consumption society. Main criteria of a good education will continue to be the certificates and diplomas that one can show for it, and the jobs which it opens up	Education will divide into two main branches. The first will qualify a person for a high status job as a member of the technocratic and professional elite. This kind of education will have high status. The second branch will teach people how to use their leisure. Its status will be somewhat lower. Both types of education will, in principle, be life-long. In the high technology, leisure society of the information age, education will be one of the biggest growth industries. Openings for professionally qualified, expert educators will greatly expand.	Education will be for capability. It will help people to learn life-skills of all kinds — physical, intellectual, interpersonal, emotional. It will be geared to a pattern of living in which most people expect to have part-time employment and also to undertake a good deal of useful, rewarding activity for themselves and their family and their neighbours. It will recognise that people often learn better from doing things with experienced people than from receiving class-room instruction from professional educators.

	Business-As-Usual	HE	SHE
Food	Patterns of food production processing. distribution and consumption will continue to be dominated by agribusiness farming. industrial manufacturing. and the distribution of processed and packaged foods through supermarket chains to standardised consumers	As for Business As Usual. but with more emphasis on new agricultural and nutrition technology. For example. more productive strains of animals and crops will be developed: beneficial elements (e.g. vitamins) will be added and harmful ones (e.g. fats) will be removed as a normal aspect of food-manufacturing and processing. People will eat out more often: fast food chains will be part of a food service industry expanding in response to the growing "leisure market"	There will be. as for energy. a tendency to greater food self-sufficiency. More people will grow food. either as small farmers and smallholders. or (for themselves) in their own gardens and allotments. Food production will be more decentralised and food distribution chains will be shorter. Food co-operatives will become more numerous. Home cooking will be the norm. Multi-family purchasing and feeding arrangements may become more common.
Planning and Housing	Urban industrialised patterns of lifestyle. employment and movement will continue to be the norm. Residential and work locations will remain in separate zones. Planning regulations will continue to assume that people use their homes for leisure and consumption activities only. Houses will continue to be designed that way. The land. premises and equipment that people need for their work will continue to be provided by employers.	The coming of the leisure society and the information age will help to reshape the built environment. People will have more leisure time to spend at home. at local leisure facilities (swimming pool. sports centres. etc.). and on trips away from home. The provision of new leisure facilities (including education) will make big new demands on space. What precisely this will mean. for example in old inner city areas. is yet clear.	As more people of people's work. leisure. learning and caring activities centre on their homes. neighbourhoods and localities. new demands for space and facilities will arise there. Today's house designs. zoning arrangements and planning regulations will become inappropriate. More people will participate in planning and building their own houses and environment. There will be more shared. multi-family households and clusters of houses. including housing co-operatives. More people will need land. premises and equipment for their own work. Residential densities will fall. in the old city centres as elsewhere. and the tendency will be toward more dispersed patterns of settlement country-wide.
Health	Individuals and society will continue to give lower priority to the promotion of health than to the treatment of sickness. "Health Services" will continue to be primarily sickness services. and people's perception of themselves as consumers of those services will continue to dominate their perception of health. The main debate will continue to be whether sickness services should be provided commercially or at public expense.	Medical technology will solve most problems. Genetic screening. organ transplants. new drugs. computer monitoring and computer records will eliminate or control congenital diseases and handicaps. enable the body to be maintained in good operating order. and enable expert physicians to deal more quickly and effectively than today with their patients' problems — a widening range of which. such as bereavements. losses and failures. will become subject to medical treatment. Health promotion and sickness prevention may increase somewhat. But the increased dominance of medical experts and technologists will ensure that today's remedial bias remains strong.	Greater personal responsibility for health will lead people to the positive cultivation of their health and to the positive promotion of a healthy physical and social environment. Higher priority will be given to nutrition. public health and the psychosomatic aspects of health than is given today. Personal self-help and cooperative mutual aid in matters of health and sickness will be more highly rated than dependence on the expertise of health professionals. People will learn to manage the health hazards and stressful transitions in their lives. Nurture and care will be emphasised. in contrast to the heroic interventionism of the HE future.
Principles	Mass employment. mass consumption. Dependence on institutions for work and for goods and services. Obligation to be employed. Organisational values. masculine values. anthropocentric values. Interventionist. instrumental mode of action. Analytical. reductionist mode of thought.	Mass leisure. mass consumption. Continued dependence on institutions. Increased dependence on technology and experts. A schizophrenic society: the working elite will be hardworking. responsible. and highly motivated: the masses will enjoy leisured irresponsibility. Technocratic values dominant. including even greater emphasis on organisational. masculine. anthropocentric values. etc.	A shift towards self-help and decentralisation in production of goods and provision of services. Reintegration of people's work with other aspects of their lives. This will bring new meaning to life. Personal values. feminine values. ecological values. Experiential mode of action. Intuitive mode of awareness.

Proponents of these scenarios, except disaster and decline and perhaps authoritarian state would claim that each offers possibilities for a healthy future. But each implies a different context for health. Under business as usual a priority need for a healthy society will be the restoration of full employment and, in the absence of full employment, special measures to meet the health needs of unemployed people and their families. In the HE scenario, by contrast, a priority need will be the provision of healthy leisure occupations for non-workers. In the SHE scenario a top priority will be to enable people to work for themselves and one another in and around their homes and local communities, and to have access to the land and facilities they need. Perceptions of what is required from health care will differ from one scenario to another. Under business as usual the main issue will be the financing and organizing of health care and medical provision on present lines; under the HE scenario the main emphasis will be on new medical and health care technology; under the SHE scenario it will be on how people can be enabled to help themselves and one another to live healthier lives, and to create a healthier society and a healthier environment to live in.

Towards a new paradigm

If you ask me which of these three scenarios reflects what is actually happening and reflects what the future will probably be like, I have to say: all three. Each reflects an aspect of present and future reality, each is one way of perceiving the shape of change. In fact, these three scenarios together can help us to see and understand the course of events as the continuing outcome of interaction and conflict between these different visions of the future.

If you ask me which is the most important of the three scenarios, and the one to which we should give most attention, then my answer without doubt is the third. To the extent that the SHE vision of the future prevails, it will involve a change of direction in the path of development that humans have been following in the last few hundred years; it will involve a change in our basic perceptions of ourselves, our society and the natural world; and it will bring new insights to bear on problems which seem insoluble today. In other words, to the extent that the SHE vision of the future prevails, it will be one aspect of what is now becoming widely known as a "paradigm shift" (3).

The nature of this paradigm shift is suggested by comparing the two columns of Table 2. The first summarizes some of the main values and tendencies underlying the business as usual and HE scenarios; the second does the same for the SHE scenario. The paradigm shift will be a shift from the values and tendencies shown in the first column to those shown in the second.

We can put this in historical perspective as follows. The industrial revolution was a great breakthrough in the capacity of human beings to harness the natural world and to organize other human beings in larger undertakings than ever before. So today we can build, manufacture, communicate, calculate, travel, make war and so on, on a scale unimaginable 200 years ago. The HE scenario merely envisages the acceleration and further enhancement of those forms of progress that have been dominant in the industrial age. By contrast, the SHE scenario envisages a new breakthrough on a different front: in the growth of our capacities to develop ourselves, our societies, and sustainable relationships with the natural world. Thus the top priorities and the outstanding achievements will in future be: sane, meaning the physical, mental and spiritual development of the healthy person; humane, meaning the development of relations between people as members of a healthy society, based on principles of social justice and mutual care; and, ecological, meaning the development of ways of life based on mutually sustaining, mutually health-giving relationships between members of the human species and the planet. Those three spheres have been only of secondary importance during the industrial age: we have taken steps to cure sickness when it has occurred, rather than positively to create good health; to correct injustice and to alleviate poverty when they have occurred, rather than positively to create a just society in which poverty does not exist; and to remedy environmental pollution and degradation only after they have become too severe to ignore, rather than to create a flourishing and healthy natural environment.

Table 2

Business as usual (and HE)	SHE
quantitative values and goals	qualitative values and goals
economic growth	human development
organizational values and goals	personal and interpersonal values and goals
money values	real needs and aspirations
contractual relationships	mutual exchange relationships
intellectual, rational, detached	intuitive, experiential, empathetic
mechanistic, reductionist	organic, holistic
masculine priorities	feminine priorities
specialization/helplessness	all-around competence
technocracy/dependence	self-reliance
centralizing	local
urban	countrywide
European	planetary
anthropocentric	ecological

So while assuming that various aspects of the Business as usual and HE scenarios will continue to exist, such as our reliance on medical technologies and health professionals when we really need them, let us consider some of the changes this paradigm shift is likely to imply for the context for health (4).

First, it will imply some shift of attention away from sickness and disease towards positive health. For example, public concern will focus somewhat less than today on issues concerning the provision of national sickness services and somewhat more on the adoption of public policies that positively contribute towards good health. Research priorities will concentrate somewhat less on factors associated with disease, and somewhat more on factors associated with good health. The perception of health hazards - such as radiation, exposure to pollutants at work, and the side effects of food additives - as negative constraints on otherwise desirable economic activities, will tend to give way to the more positive perception of the creation of good health as a prime goal of all desirable economic activity.

Second, it will imply some shift from outer-directedness to inner-directedness. For example, conventional medicine tends to perceive disease as an external agent invading the body from outside, and concentrates on external interventions to combat it, in the form of surgery, drugs or other externally administered treatments. The new paradigm of health will tend to see many aspects of people's health and ill health as arising primarily from their own living conditions and psychological experiences, and will concentrate rather more on enabling people to make necessary changes.

Third, and closely connected with the second, there will be some shift away from the currently prevailing perception of the body as a physical machine, and of health as the proper mechanical functioning of its various parts, towards a more holistic perception of health as a psychosomatic condition of wellbeing and of healing as a psychosomatic process of restoration, embracing body, mind and spirit.

The fourth change, which will be closely connected with the first three, will be in people's perception of their responsibilities for their health. Part of the reason why we feel so dependent today on medical professionals is because they know more about diseases and methods of treating diseases than we do. Under the new paradigm we shall take more responsibility ourselves, recognizing that it is the way we ourselves live that primarily influences our health, and that we know more about ourselves than the medical profession or the drug industry.

Fifth, this growth of personal self-reliance in health will be linked with a growing sense of community and a growing capacity for mutual aid. Self-help groups, whose significance has been growing rapidly in recent years, in health as in other fields, are mutual aid groups too.

Sixth, this recognition that an individualistic perception of health is not enough will lead increasing numbers of people to a more active concern for, and greater involvement in, local community health issues.

Seventh, perceiving that health is an integral part of the whole life of a society (as well as of a person), and not just a subsidiary departmental concern, increasing numbers of people will become actively involved in campaigning for healthy public policies in every sphere - economic policy, agriculture, transport, and so on.

Finally, a growing perception of the connections between public policies that are healthy, public policies that are socially just, and public policies that are ecologically sustainable, will continue to strengthen the links between groups and movements active in these three fields.

To conclude this section of the paper, I shall suggest a historical comparison. In the religious middle ages, people accepted the obligations attaching to the station in life in which God had placed them. Just so, their dominant attitude towards health and ill health was one of fatalistic acceptance. In the humanistic modern period, culminating in the industrial age, people came to see themselves as individuals living in an impersonally organized society in which some people dominated others. Just so, in the sphere of health, they came to see themselves either as comparatively powerless individuals having health and ill health administered to them impersonally by others more powerful than themselves, or as comparatively powerful individuals doing the administering. The transition to the post-industrial age, shaped by the SHE vision of the future, will bring another shift. Increasing numbers of us who formerly perceived ourselves as powerless will develop the power to be more self-reliant, and to take on greater responsibility for our own health, our own work, and other aspects of our own lives, within a wider frame of responsibility towards the society and the ecosystem of which we are part. Meanwhile, increasing numbers of those, such as doctors and other health professionals, now perceived as powerful in the sphere of health, will take on a new enabling and empowering role. In other words, they will see it as their main task to enable and empower the people to whose health they minister to take greater responsibility for their own health.

Some practical implications

I have suggested that the changing context for health will be muddled and, to some extent, turbulent. I have suggested that it will be shaped by interaction and conflict between different visions of the future. I have suggested that a powerful influence in shaping it will be a vision of a future in which people take greater personal responsibility for their own health and develop their capacity to take more control of it; in which the positive creation of health is given a higher priority than today; and in which we perceive our own personal health to be closely linked with the health of the society, the environment and the whole planet. I would like to end by suggesting some practical implications, and pinpointing some key areas for progress.

Individuals and households

The growing attention now being paid to lifestyles and health, health education, and self-help in health (5) recognizes that people can be enabled to exercise more control over their own health. Key points for progress are likely to include an improving status for laypeople, and especially women, in questions of health; increasing recognition that social and environmental factors limit the scope for personal action and - beyond a certain point - make it fruitless to "blame the victim"; and the "consciousness-raising" function of self-help groups which enable people to see, not only how to help themselves and one another, but also how to work for changes in the social and physical environment affecting their health (6).

Localities

The growing emphasis on community health (7) and community care recognizes that local communities cannot and need not continue to be dependent on institutions outside their own control to take care of their health. Key points for progress are likely to include growing determination to control local economic activities, such as chemical plants and heavy transport routes through residential communities, that create local health hazards; growing recognition that, in the economic sphere, excessive local dependence on outside employers and outside sources of vital goods and services does not contribute to a locality's good health; and the wider use of local health indicators to enable people to compare the health of their own locality with others, health professions and health organizations. A shift of emphasis towards enabling people to extend their control over their own health is already evident, e.g. in cardiology (8). A key task here will be the systematic exploration of the scope for and the practicalities of extending the enabling approach throughout the whole field of health and medical care.

Education

It is being increasingly found that practical involvement in real-life issues is a necessary feature of environmental studies, women's studies, cross-cultural studies, peace studies, development studies and other such fields of contemporary education. A key feature of health education, e.g. in schools, will be the increasing involvement of students in real health issues - personal, local, national and international.

Corporations and other organizations

At present, health is seen as a negative factor by many corporations and other organizations. Manufacturers of products such as automobiles, chemicals, tobacco and alcohol, and operators of power stations (nuclear and fossil fuel) are examples of a strictly defensive attitude towards health. Their concern is to persuade us that the amount of ill health they create is not excessive. They make no serious pretensions of being in the business of helping people to live healthier lives or of helping to create a healthier society. Two key areas of progress here will be first, to toughen up against corporate health hazards; and, secondly, to create a new climate of opinion in which increasing numbers of corporations and organizations will strive to show that they are making a positive contribution to good health.

Provincial, state and national governments

The health-related aims of most governments are limited to dealing with ill health when it has occurred and, to a lesser extent, taking preventive measures to limit the ill health that will occur. Few governments today have any positive policies for creating a healthier society on the lines of the World Health Organization's strategy for health for all by the year 2000 (9). The key task here is to rectify this. In the first place, what is needed is for public opinion to persuade governments to make a systematic survey of every area of policy - economic and financial, employment, housing, planning, agriculture, transport, education, etc. - in order to identify changes that could make a contribution to better health.

International

The World Health Organization can continue to make a vital contribution. But the two key areas here are clearly international security, i.e. peace and disarmament; and international economic relations, in particular as they affect the third world (10). The health of people all over the planet, and the health of the planet itself, will be directly affected by progress or lack of progresss in these two key areas.

Public opinion

Underlying the possibilities for progress in every other sphere will be the development of informed, active public opinion. The key task is to spread awareness in the minds of people everywhere that we can act, personally and collectively, in our own lives or in our professional and organizational roles or in both, to help to create healthier conditions of life for ourselves, for other people, for future generations, and for the planet as a whole. One of our main tasks is to begin to spread this awareness and to create this kind of informed public opinion.

REFERENCES

1. A fuller discussion of these scenarios is in my book, "The sane alternative: a choice of futures", revised and expanded edition 1983 (Robertson, The Old Bakehouse, Cholsey, Oxfordshire, England).
2. See Amory Lovins: "Soft energy paths": Penguin, 1977.
3. See T.S. Kuhn: "The structure of scientific revolutions": University of Chicago Press, 1970.
4. A useful account is in Fritjof Capra: "The turning point": Wildwood House, 1982. The more recent work of Dr Trevor Hancock and his colleagues at "Paradigm Health", Toronto, is important.
5. See, for example, "Self-help and health in Europe": ed. Stephen Hatch and Ilona Kickbusch: WHO Regional Office for Europe, 1983.
6. Jane Greetham makes this point in "Community development through a community health project" in "Radical community medicine", Summer 1984.
7. In their 1979 report on "Rethinking community medicine", Dr Peter Draper and his colleagues from the Unit for the Study of Health Policy, Guy's Hospital Medical School, London, recommended the establishment of health promotion teams at local, as well as national level.
8. See, for example: "The responsibility of the cardiological mapmaker": American Heart Journal, August 1980; and "Stress and the cardiovascular system": The Practitioner, September 1982; both by Dr P.G.F. Nixon, Consultant cardiologist, Charing Cross Hospital, London.
9. See, for example, Peter O'Neill: "Health Crisis 2000": WHO (Europe) with Heinemann. London 1983.
10. It will be important to establish firm links between the emerging new paradigm for health and the emerging new paradigm for economics, discussed in London in June 1984 at The Other Economic Summit (TOES, 42 Warriner Gardens, London SW11 4DU).

INEQUALITIES IN HEALTH
THE BLACK REPORT: A SUMMARY AND COMMENT[a]

by
Alastair McIntosh Gray

Introduction

In August 1980 the United Kingdom Department of Health and Social Security published the Report of the Working Group on Inequalities in Health, also known as the Black Report (after chairman Sir Douglas Black, President of the Royal College of Physicians). The Report showed in great detail the extent to which ill health and death are unequally distributed among the population of Britain, and suggested that these inequalities have been widening rather than diminishing since the establishment of the National Health Service in 1948.

The Report concluded that these inequalities were not mainly attributable to failings in the National Health Service (NHS), but rather to many other social inequalities influencing health: income, education, housing, diet, employment, and conditions of work. In consequence, the Report recommended a wide strategy of social policy measures to combat inequalities in health. These findings and recommendations were virtually disowned by the then Secretary of State for Social Services, very few copies of the Report were printed, and few people had the opportunity to read it.

The Black Report is an important document that deserves wide attention and debate. This summary and comment is intended to give greater access to its evidence, arguments, conclusions and recommendations.

The pursuit of equality is a principle that has been deeply embedded in the British National Health Service ever since the 1946 NHS Bill (1) promised comprehensive health care "available to everyone regardless of financial means, age, sex, employment or vocation, area of residence or insurance qualification". Despite this intention, and despite almost three decades of health care provided through the NHS, there was by the mid 1970s a widespread concern that inequalities in health in Britain showed no sign of diminishing and had become, perhaps, even more pronounced.

In consequence, a Working Group was appointed in April 1977 at the request of the then Secretary of State for Social Services, with the task of reviewing information about differences in health status between the social classes, considering possible causes and the implications for policy, and suggesting further research. The Working Group contained two medical and two sociological members.

---

[a] This article was published in International journal of health services, 12(3) (1982).

218

The Report of the Working Group (2) was published in August 1980, but despite its depth and breadth and the widespread interest expressed in the medical press and elsewhere, only a very limited number of copies were made available. Participation in the debate over the Report could be greatly widened, however, if the Report's contents were more easily accessible, and it is with that intention that this paper has been prepared.

This edited version of the summary of the original report focuses upon the explanations for health inequalities considered in the Report, and on the chapters which suggest policies for the reduction of inequalities in health. Although any exercise of this kind involves judgements concerning what to emphasize and what merely to note - judgements with which the original authors would not necessarily agree - care has been taken to give a balanced rendering of the Report, and to avoid introducing additional comments or opinions. Following the summary, the paper presents some of the views and comments on the Report that others have expressed since its publication. However, the main part of this final section of the paper has given the present author the opportunity to include some personal observations, based largely but not wholly on the perspective of an economist engaged in health services research.

A summary of the report of the Working Group on inequalities in health

Explanation of health inequalities

Chapter 6 of the Report attempts to unravel the nature of the association between social/occupational class and health, and to consider some of the reasons why this association seems to have survived the dramatic reduction in 19th century common causes of death. The first part of the chapter outlines four theoretical explanations of this relationship: artefact explanations; theories of natural or social selection, materialist explanations; and cultural/behavioural explanations.

The first approach emphasizes the "artificial" nature of the association and suggests that it is more important to look at changes in the occupational/social structure of Britain over time. It is argued that the size of the bottom occupational group has shrunk, and that this may have been part of a process in which (a) older, less healthy people are left in the bottom group while younger people move to new job opportunities; (b) those left at the bottom may be in "residual" industries with poor health records; (c) the upwardly mobile have better health, or their health improves relative to those left in the bottom group as they move up. However, while substantial changes have taken place in the occupational structure in the last 30 years, these changes have slowed down since 1961 and are less than some have suggested.

Natural and social selection approaches make social class the dependent variable, arguing that overall health or strength dictate social resources and hence class, with those affected by ill health drifting down the occupational scale and those with good health climbing. Similarly, regional variations in ill health are seen as a reflection of the movement of the fittest and most able to dynamic parts of the economy, with the less able staying behind. The same selection procedure might also be important, it is argued, in considering industrial hazards and risks, the objective or intrinsic risk associated with an occupation being understated or overstated by a selectively robust or unhealthy work force.

Materialist and structural explanations largely attach primary significance to the role of economic deprivation and are differentiated by the extent to which they support a radical critique such as Marx's that seeks to provide an explanatory account of the capitalist system of production and its concomitant cultural and ideological characteristics, which is inseparable from the exploitation of human labour. This form of analysis, as the Report notes, "draws attention to [the capitalist mode of production's] dependency on an unequal distribution of resources as well as its inherent tendency to promote material inequality in health as well as property between human beings" (2, p. 158).

One paradox associated with this approach is the relationship between industrialization on the western European model and the overall decline in mortality rates, a decline that in many ways would suggest that concepts of intensifying poverty and exploitation have themselves become outmoded. This, however, would imply that subsistence and poverty are absolute concepts, when in fact the Report argues that they are relative concepts. If, in addition, evidence suggests that the overall distribution of wealth remains concentrated and the numbers at, below, or slightly above supplementary benefits standards are increasing (2, pp. 159-161), then class inequalities in health would be expected to persist.

Areas of uncertainty remain with this approach. These include the effects of social mobility, the fluctuations of earnings within many occupations, and unmeasured benefits in kind. Two further dimensions of importance concern the relationship between levels of health and the national economy. In one form - that used by Brenner (3,4) - recession is posited as causing increased mortality and morbidity, although the variability of the lags used and the vagueness of the causal mechanism employed - "stress" - suggest that further work is required in this area. In a second and contradicting form (e.g. Eyer (5,6)) it is argued that the process of commodity production is the principal source of human ill health and thus the upswing of the business cycle is associated with higher mortality/morbidity levels.

The partial materialist or structural explanation is outlined in the Report with reference to social medicine, and termed "ameliorative". This approach stresses individual variables such as poor housing or inadequate diet as being causally linked with ill health. As the Report notes (2, p. 165) these factors could in themselves be explained in macrostructural terms, hence it becomes difficult to refer to them as explanatory variables.

Cultural/behavioural explanations of health inequalities give primacy to the independent, causal and individual role of ideas and behaviour, with personal traits such as recklessness, fecklessness, irresponsible behaviour, or incautious lifestyle being "moving determinants of health status". The individual as the basic unit of analysis has a parallel in neoclassical microeconomics. In so far as systematic individual traits are acknowledged among social groups who share other characteristics, explanations tend to be derived from Lewis's notion of the "culture of poverty ... ," a variant of the transmitted deprivation hypothesis that stresses the survival of ideas and practices in a subculture, beyond the decline of the material base from which it emerged.

The Report unambiguously states its belief that the materialist or structural approach is the most consistent with empirical information on health inequalities. However, clearly much evidence can, it acknowledges, be better explained in other terms and perhaps over a life cycle several sets of explanations are necessary.

The second part of this chapter examines health inequalities in different age groups in the light of the preceding theoretical approaches, concluding that "it is from the realm of the materialist perspective that the most plausible explanation of health inequality between adults in Britain is to be found. It is no good treating [for instance] cigarette smoking as an aberrant or irresponsible behavioural response while society as a whole permits, even depends on, the widespread production and promotion of tobacco goods. ... The manufacture and consumption of tobacco products and its effects on health provides a very clear example of the limitations of conventional health policy as a means to reduce health inequality" (2, p. 191).

Thus health policy (e.g. antenatal provision), specific social policy interventions (reduction of overcrowded homes), more general features of material inequality, and economic organization must all play a part in informing policy. The recommendations made toward the end of the Report also draw on the analysis contained in this chapter by stressing early childhood as "the period of life at which intervention would most hopefully break the continuing association between health and class" (2, p. 194).

Policies to reduce inequalities in health

The final two chapters of the Report are concerned with suggesting policies that could begin to redress some of the inequalities in health outlined in previous sections of the Report. Chapter 8 deals with a strategy for the health and personal social services, and Chapter 9 with wider policy initiatives.

The objectives outlined in Chapter 8 are threefold: priority for children at the start of life; priority for those bearing the brunt of cumulative ill health and deprivation; and priority for preventive action relevant to all.

Shifting resources within the health service budget is a topic that provoked one of the few disagreements among the authors of the Report, with some willing to suggest a reduction in certain areas of spending. Others considered that this would damage these services and that higher priority programmes must be funded from additional expenditure, which, eventually, could lead to savings through reduced hospital admissions or other treatments.

The Report is broadly in favour of the procedure recommended by the Resource Allocation Working Party (RAWP) (7) for an equitable geographic distribution of resources. It recommends that increasing attention be paid to area and district allocation, and to experimenting with supplementary indicators (e.g. those related to housing) to examine the extent of correlation with RAWP-derived estimates.

Other recommendations include: (a) the formation of a Working Group to review responsibilities for the provision of sheltered housing; (b) an enlarged programme of health education; (c) the establishment of National

Health Goals; (d) stronger measures to reduce cigarette smoking, including a ban on advertising, promotion and sponsorship; increases in tobacco duty, and greater provision of nonsmoking areas; (e) steps to increase utilization of antenatal clinics, and screening programmes for Down's syndrome, neural tube defects, and adult severe hypertension; and (f) special health and development programmes in a small number of selected areas as part of an evaluative research programme.

A wider strategy

A theme of the Report is that inequalities in health and the origins of ill health are problems for which the solutions lie in many respects outside the health care sector. Chapter 9 of the Report explicitly draws these threads together and presents the framework for a more general attack on health inequalities. The key element is identified as an antipoverty strategy, which is perceived in two main ways: first, a fairer distribution of resources through a more progressive taxation system, the possibility of defining minimum and maximum earnings (and family income), and a comprehensive package of entitlements and benefits; and second, the encouragement of "self-dependence and a high level of individual skill and autonomy," by "raising the standards and broadening the content of education," by "improving individual access to information about, and control over, what goes on in the immediate community as well as society generally, and by "conferring rights to employment and occupation and creating corresponding opportunities for such employment" (2, p. 303).

These broad strategies, directed principally at young families and children, are the framework within which more specific measures are developed. These measures include the following:

1. Raising the child benefit, child tax allowance, and family allowance, with the initial goal of child benefit at 5.5% of average gross male industrial earnings, and longer-term indexation, age-banding, and disability allowance.

2. Increasing the infant care allowance through maternity benefit and the maternity grant to the approximate level of child benefit, paid to mothers of children under five years of age.

3. Local authorities should be statutorily obliged to ensure an adequate provision of preschool education and day-care facilities.

4. Free school milk and meals should be a statutory obligation of local authorities.

5. The Health Education Council should receive sufficient funds to mount child accident prevention programmes, directed in particular at local authority planners, engineers, and architects.

6. Policy measures affecting households without as well as with children should be concentrated on a comprehensive disability allowance, directed at that part of the population living in poverty, and the disabled.

7. The DHSS, the Department of the Environment, the Health and Safety Executive, together with the Confederation of British Industry (CBI) and trade unions, should "draw up minimally acceptable and desirable standards of work;

security; conditions and amenities; pay and welfare or fringe benefits" (2, p. 336). Some examples of the present wide differences in mortality for specific occupations, that these proposals aim to reduce, are given in Table 1.

8. In housing, a substantial increase in local authority spending on improvements, including joint fundings for health and local authorities to encourage adaptations for disabled people and other provisions for specialized housing needs.

9. A coordinated policy involving the many departments and organizations documented above requires new machinery, at Cabinet Office level, to plan and administer policies. The establishment of a Health Development Council is proposed. This would be an independent body with a small staff of seconded civil servants, which, although strictly advisory in function, would play a key role in social planning. An important part of its task would be "commenting on, and contributing to, plans, including expenditure programmes, which are to be published by the government on matters relevant to its concerns" (2, p. 348). Comparable machinery at the local level, perhaps based on existing health/local authority joint consultative committees, could also be established.

A critical assessment

It was noted earlier that the Report was not well received by the Government on its publication in August 1980. The *Lancet* referred to a "frosty reception" (8) from the Secretary of State (Mr Patrick Jenkin), to "publicity in the lowest possible key" (9), and to the impression "that Ministers and officials are keen to reduce the Report's impact to a minimum" (9, p. 545). The *British medical journal* spoke of the "waste of time and effort" in Mr Jenkin's "flat rejection of the recommendations" (10) and suggested it "should be examined more closely than Patrick Jenkin's foreword suggests that it has been" (11).

By 1981 concern had switched to a "sustained campaign of demolition against its findings" (12) on the part of the Social Services Secretary and doubts whether research commissioned by the DHSS "is being conducted in a genuinely objective fashion or whether it is being selectively used to bolster a predetermined ideological position taken by the administration" (13).

Comments such as these stand as testimony to the importance many observers of health policies and politics attach to the subject of inequalities in health. It is unfortunate, therefore, that the Government's initial responses to the Report have largely deflected attention from detailed examination and assessment of what the Report actually says. This concluding section is intended as a contribution to that task. It proceeds by considering some aspects of the analysis the Report presents, and then examines the Report's policy recommendations. The issues raised are of necessity selective, and some of the basic tenets of the Report have simply been accepted from the outset. For instance, no one reading the Report could easily contradict the conclusion from the weight of evidence it assembles that systematic class-related differences in health experience do exist; that these are associated with the structure and operation of the socioeconomic system within which people are born, live and die; and that a way out of these inequalities will involve very much more than individual responses: the Government is inextricably involved.

Table 1. Mortality by selected occupational units, men aged 15-64 years, England and Wales, 1976

Occupational unit	Direct age-standardized death rate per 100 000	SMR
RELATIVELY LOW DEATH RATE		
University teachers	287	49
Physiotherapists	297	55
Paper products makers	302	50
Managers in building and contracting	319	54
Local authority senior officers	342	57
Company secretaries and registrars	362	60
Ministers of the Crown, MPs, senior government officials	371	61
Office managers	377	64
Primary and secondary school teachers	396	66
Sales managers	421	70
Architects, town planners	443	74
Civil service executive officers	467	78
Postmen	484	81
Medical practitioners	494	81
RELATIVELY HIGH DEATH RATE		
Coal miners (underground)	822	141
Shoemakers, shoe repairers	898	156
Leather products makers	895	147
Machine tool operators	934	156
Watch repairers	946	154
Coal miners (above ground)	972	160
Steel erectors, riggers	992	164
Fishermen	1028	171
Deck, engineering officers, and pilots, ship	1040	175
Labourers and unskilled workers, all industries	1247	201
Policemen	1270	209
Deck and engine room ratings	1385	233
Bricklayers' labourers	1644	274
Electrical engineers (so described)	1904	317

Source: Inequalities in health (2), p. 337.

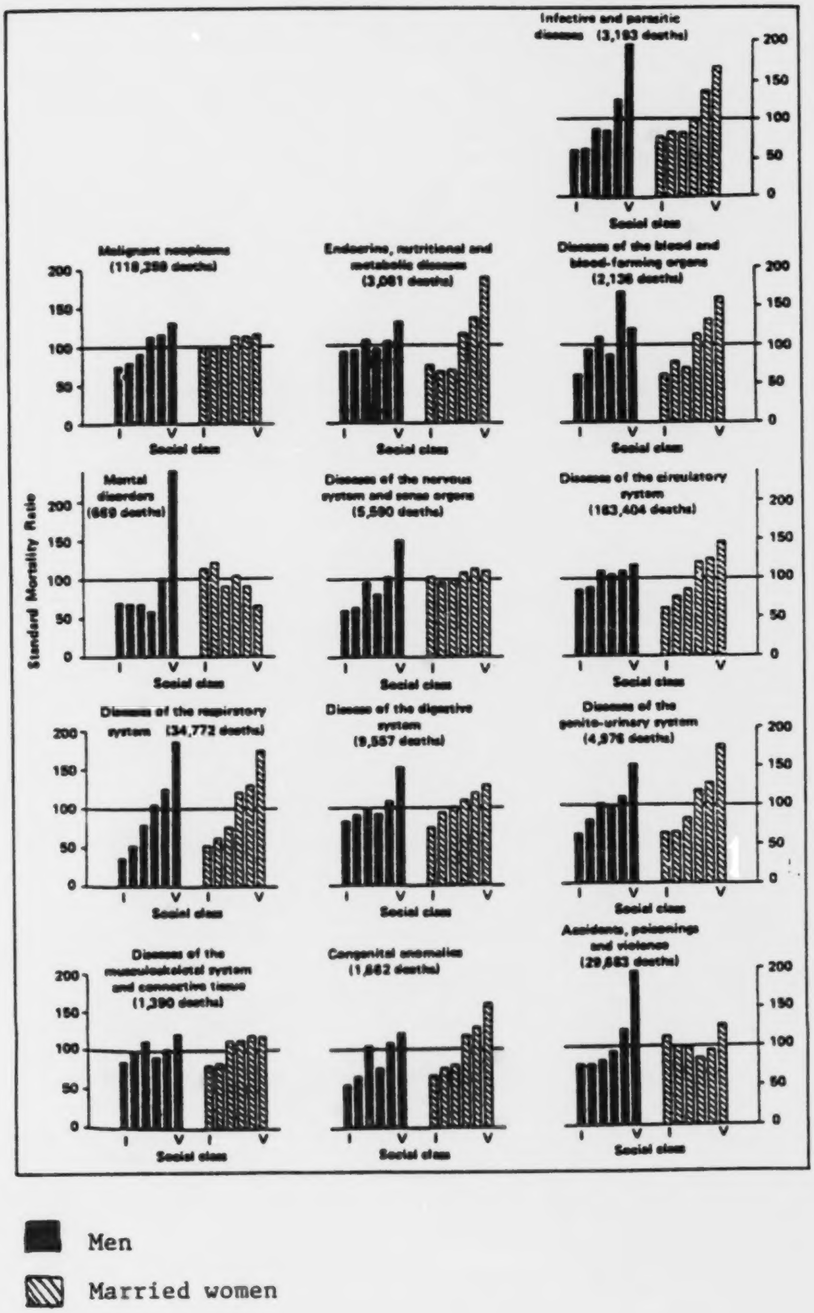
As the Report itself makes clear, studies of patterns of ill health are handicapped by the difficulty of obtaining information on morbidity. As a consequence, mortality rates continue to be the main focus of attention. These do give indications of inequalities, and some age-related or cause-related mortality rates (e.g. the infant mortality rates) are more sensitive than others in suggesting links with wider socioeconomic factors. Nevertheless, the historical decline of infectious diseases and tuberculosis, and the increased incidence of chronic and degenerative diseases, suggest that the relationship between mortality and morbidity has changed and may be fairly weak. Consequently, the study of mortality rates may not provide an accurate picture of patterns of ill health: inequalities in death may not be similar to inequalities in health. This problem may be particularly severe in the case of mental illnesses, which rarely result in death yet account at any time for around one in four NHS inpatients. Given also that the recording of mental illnesses may be more prone to measurement errors in the self-assessment used by the GHS than that for physical ailments, it is unfortunate that the Report was unable to explicitly consider this area of morbidity.

A second point to note in the analysis conducted by the Working Group is the portrayal of inequalities in the form of a gradient across social or occupational classes. In fact as Fig. 1 shows graphically, for many diseases cause specific mortality rates for men in social class III-M (manual) are lower than those for social class III-N (nonmanual), while the very limited number of women in social class I (around one per cent of the female working population) must make the standardized mortality ratios for this class less meaningful than those for classes II to V.

The distribution of inequality is important because it will, or at least should, influence the kinds of policy that would have most impact. If the inequalities take the form of a polarity between top and bottom, then redistributional measures would have to be highly concentrated and accurately targeted. If, on the other hand, the object was simply to reduce the number of "excess deaths" occurring - i.e. over and above the numbers that would have died if the death rate for social class I was applied to other social classes - the appropriate redistributional programme might be different because the largest number of deaths are occurring in social class III, which also contains the largest proportion of the population (14). At the heart of this observation lies a dilemma that is not explicitly tackled by the Working Group. The elimination of inequalities may be a valid long-term objective, but in the short run resource constraints will make it necessary to select priorities. Is it, therefore, better to greatly reduce the inequalities experienced by a small part of the population, or to effect a smaller improvement for a larger number of individuals? No choice, of course, will ever be quite so stark, but the issue of weighting different degrees of inequality remains crucial.

Thirdly, the discussion of relationships between health and economic activity, which opens up a way of potentially integrating the findings of the Report, is not pursued as far as it might have been. The "materialist" explanation of the sources of inequality, and the references to the nature of Britain's economic system, might logically have led to a categorization of class based not on occupation but rather on the relationship of classes to economic ownership and control in society as a whole. This kind of approach, more fully documented elsewhere (see, for instance, Doyal (15) and Navarro (16)), might have afforded more detailed structural insights into the causation of inequality. In particular, such an approach might have permitted

Fig. 1. Cause-specific mortality by occupational class, men and married women by husband's occupation, ages 15-64, England and Wales, 1970-1972



Source: Inequalities in health, (2), p. 40.

the Working Group to discuss why inequalities have been so persistent and so difficult to reduce. This point is especially apt in relation to the recommendations of the Report, and will be discussed further below.

Finally, the Working Group's analysis fails to consider the many aspects of sexual inequalities in health that cannot be understood solely on the basis of sex-specific mortality rates. For instance, the variations in access to NHS abortion services across different regions are extraordinarily large, and it is difficult to believe that they would be tolerated in services which affect the population as a whole. Similarly, many women are known to be dissatisfied with the attitudes of the health service to their health problems and needs, particularly in primary care consultations and in the tendency to treat pregnancy and childbirth as illnesses. These factors suggest that there is a pattern of health experience based on sex which overlays the social class patterns the Report considers, and which may be a further important dimension of inequality. Similar arguments might be made with respect to racial discrimination.

Turning to the recommendations made by the Working Group, comments can be made at a number of different levels. These comments can be traced to two sets of seeming contradictions contained within the Report. The first relate to the role of the health care system. In Chapter 6 of the Report, the discussion of causes of inequalities does not even consider the possibility that they might be attributable partly to an unequal provision of health care facilities and resources. Yet the recommendations contained in Chapter 8, by stressing the importance of resource allocation formulae, appear to be based on an opposite conclusion, albeit while acknowledging the greater importance of a "wider strategy".

The "wider strategy" contains the second, and perhaps most important, set of contradictions. The Report notes the important role of "economic and associated sociostructural factors", the persistent and deep-rooted nature of unequal income and wealth distribution, indeed the possibility that the present economic system may promote inequality, yet assumes that nevertheless a number of major changes are capable of being enacted to reduce substantially or eliminate inequality while leaving the framework of these "economic and sociostructural factors" unchanged. The recommendations, for instance, that trade unions and CBI representatives should participate in drawing up "minimally acceptable and desirable standards of work, security, conditions and amenities, pay, and welfare or fringe benefits" either flatly contradict the implicit conclusion of the "materialist" explanation that conflicting interests are part of the economic system, or amount to what would be virtually a revolutionary change in that economic system. This is not to deny that scope exists for making changes that might help to reduce the severity of inequalities and their origins; it is rather to suggest that there are limits beyond which such changes would be resisted. The lack of discussion of the process by which such changes might be made, the assumption that a favourably inclined government initiating legislation might suffice to effect these changes, are perhaps an alternative context in which to place the "unrealistic" charges levelled by Mr Jenkin. It was perhaps an unspoken acknowledgement of these problems that led the Working Group finally to describe their recommendations on the abolition of child poverty as "a modest first step which might be taken toward this objective" (2, p. 366).

One of the more original contributions of the Report is the willingness to see health care as only one (perhaps not very efficient) way in which health can be influenced, and to discuss the possibility of focusing health programmes on other areas of social policy such as housing or income maintenance. Such a strategy would be "preventive" in a much wider sense of the word than is currently employed, and there is still a need to emphasize that in this definition a prevention programme should not necessarily be viewed in the same way as a health care programme, i.e. a specific bundle of services whose effect can be increased by increasing expenditure to provide more of them. Rather, a preventive strategy as outlined by the Working Group is interventionist: it requires changes in policy across many government departments, and not foremost a budget of its own to spend on its own programmes. A more detailed outline of the way in which such a prevention "agency" could operate without undermining government autonomy would therefore be a valuable contribution.

In this framework of broad changes in the distribution of responsibilities for health across public policy programmes, a likely outcome would be a perception of the National Health Service as, more correctly, a National Illness Service with responsibilities restricted to care, cure and medical services. Nevertheless, the Report does envisage some redistribution of resources taking place within the NHS budget away from acute care and toward preventive health care and community care. The suggestion raises a problem which apparently led the authors of the Report to disagree: in changing the emphasis of expenditure from acute care to prevention, is it sufficient to cut back or freeze one budget and expand the other, or is it in the short run necessary to spend more on the preventive services and not cut back on acute spending until the effects of increased preventive work can be felt? The answer to this question is dependent upon judgements concerning the potential effects of a cut in acute services, or possible wastages that might be eliminated. The issue, however, does demonstrate the much more limited scope than is sometimes argued for short run savings in expenditure resulting from restructuring long-term objectives.

A final point to be made in relation to the recommendations of the Working Group is the need for evaluation. It would be wrong to suggest that detailed evidence of the effects of all the recommendations is an essential precursor of their implementation. The central theme of the association between inequalities in health and general socioeconomic inequalities is, as Illsley pointed out in his Rock Carling lecture (17), a century old commonplace among Registrars-General, epidemiologists, and social reformers. It is incontrovertible in its totality if not its details, and controversy is more accurately attributable to the policy and political implications than to any doubts about the overall relationship. In addition, as Sir Douglas Black has himself pointed out (18), it is in the nature of the different kinds of service involved in a reorientation of health policy that the present caring and curing services are tangible, familiar, in high demand, and more open to measurement than a comprehensive prevention strategy, which would inevitably be in large part an act of faith, albeit based on soundly reasoned expectations.

Nevertheless, the Report has highlighted the lack of information about the precise causes of health and ill health, not least in the relative importance of the health service as opposed to other aspects of the socioeconomic system. There is little discussion of the comparative consequences of implementing Chapter 8's recommendations on the health and personal social services and Chapter 9's wider strategy. A starting point for the evaluation of proposals to reduce inequalities in health might therefore be an attempt to estimate accurately the effects of inequalities of health care provision and the consequences of making health care distribution, access, and/or impact more even.

The likelihood remains, however, that such studies would confirm the limited extent of change that could be induced through the health service, and some way would have to be found to use evaluative techniques to decide priorities for a wider strategy. To date, discussion of these wider proposals (19,20) has focused almost entirely on costs, and has virtually ignored the benefits that could result from an improvement in health and a reduction in the unequal distribution of ill health and death. Cost-benefit analyses have earned themselves a rather poor reputation, in many instances quite justified, by their attempts to place money values on all sorts of intangible costs and benefits and their often value-laden selection of the costs and benefits to be included in an analysis. The cost-benefit approach, however, has performed the useful role of establishing that costs and benefits are not simply the direct financial consequences of a project or programme, but encompass such things as waiting times, anxiety, uncertainty, as well as effects on production, employment and consumption. Moreover, it is clear from the discussion surrounding the cost of the Report's recommendations that the "costs" are in many instances not costs as defined in a cost-benefit study (additional use of resources) but rather are transfers that do not result in any net additional use of resources. There are compelling reasons, therefore, for placing discussion of the recommendations in a framework that would comprehensively evaluate their overall economic implications. Economists in particular should be encouraged to pursue research in this area.

A concluding assessment of the Report must acknowledge the extremely useful compilation of data which the Working Group has prepared, and their willingness to step outside the bounds of traditional medical models of ill health and consider the socioeconomic factors that have led to their wider strategy. If they have at some times found themselves ensnared in ambiguities and at others been unable to produce causal evidence, it does not follow that they are heading in the wrong direction nor that their recommendations should be ignored. Rather, these shortcomings are the consequence of a laudable attempt to shake off the traditional attitudes toward ill health that still permeate health policies. The Report's detailed documentation of thirty years of static or widening inequalities is eloquent testimony to the need for change in thought and action.

Acknowledgements

H.M. Stationery Office Crown Copyright graciously gave permission to quote freely from the original Black Report.

REFERENCES

1. A national health service bill. Cmnd. 6761. London, H.M. Stationery Office, 1946.
2. Inequalities in health: report of a research working group. London, Department of Health and Social Security, 1980.
3. Brenner, M.H. Fetal, infant and maternal mortality during periods of economic instability. International journal of health services, 3(2): 145-159 (1973).
4. Brenner, M.H. Health costs and benefits of economic policy. International journal of health services, 7(4): 581-623 (1977).

5. Eyer, J. Hypertension as a disease of modern society. International journal of health services, 5(4): 539-558 (1975).
6. Eyer, J. Does unemployment cause the death rate peak in each business cycle? International journal of health services, 7(4): 625-662 (1977).
7. Department of Health and Social Security. Sharing resources for health in England: report of the resource allocation working party. London, H.M. Stationery Office, 1976.
8. Inequalities in health. Lancet, 2: 513 (1980).
9. Deitch, R. Commentary from Westminster: unwanted legacy from Mr Jenkin's predecessor. Lancet, 2: 545 (1980).
10. News and notes. British medical journal, 281: 690 (1980).
11. Equalities and inequalities in health. British medical journal, 281: 763 (1980).
12. Deitch, R. Commentary from Westminster: Mr Jenkin on the Black Report. Lancet, 1: 735 (1981).
13. Deitch, R. Commentary from Westminster: The debate on the Black Report. Lancet, 2: 158 (1981).
14. Snaith, A.H. Debate on the Black Report. Lancet, 2: 308 (1981).
15. Doyal, L. The political economy of health. London, Pluto Press, 1980.
16. Navarro, V. Class struggle, the state, and medicine. Oxford, Martin Robertson, 1978.
17. Illsley, R. Professional or public health? Sociology in health and medicine. London, Nuffield Provincial Hospitals Trust, 1980.
18. Black, D. The Black Report. Lancet, 1: 1379 (1981).
19. Morris, J.N. Equalities and inequalities in health. British medical journal, 281: 1003 (1980).
20. Deitch, R. Commentary from Westminster: a debate for the new session. Lancet, 2: 428-429 (1981).

TRAINING HEALTH EDUCATORS FOR SOCIAL CHANGE[*]

by
Nicholas Freudenberg

Health educators have long debated the relative importance of individual behaviour and social factors in determining health and disease. This debate has in turn influenced the content of training programmes for public health workers. The first part of this article reviews the rationale for a health education practice that seeks to change institutions, policies and environments rather than only individual behaviour. The second part proposes changes in the curriculum of graduate programmes in health education that would enable health educators to be more effective advocates for social change.

Advances in public health result from the interactions of two powerful social forces. On the one hand, those who control society's resources have supported improvements in the living conditions of the population in order to ensure a healthy and stable workforce, to protect themselves against diseases, and to undercut more fundamental efforts for changes. On the other hand, popular social movements have fought for higher wages, better housing, more food and easier access to health care in order to achieve healthier, more satisfying lives. From the dynamic interplay of these two forces specific public health measures emerge. It is not accidental that major improvements in health status and public health practice have followed periods of social upheaval and unrest. For example, it was after popular mobilizations in the first two decades of this century that health departments began to provide free milk, immunizations, well child programmes, and similar services. And certainly the neighbourhood health centres, the Medicaid programme and Food Stamps of the 1960s are in part a legacy of the civil rights movement.

Class basis of health education

Health education practice also reflects the interaction of these class forces. By analysing the ideology from which different forms of health education emerge, we can understand better its ultimate consequences. A few historical examples illustrate how those in power have used health education for their purposes. School health education, for example, got its start in the middle of the 19th century as enlightened capitalists crusaded to make public schools vehicles for integrating immigrant children into the economy. Instruction in personal hygiene, "clean living", and good work habits prepared children for jobs in industry (1). Others saw school health education as a way to protect "real Americans" from the diseases foreigners brought with them.

Similarly, workplace safety education was spurred in the first decades of this century by employers' fears about dropping productivity caused by the high accident rates (2). These accidents were blamed on careless workers, and the National Safety Council, an industry-dominated voluntary organization, developed health education campaigns to exhort workers to be more careful (3).

---

[*] This article was published in the International quarterly of community health education, 5(1): 37-52 (1984-85).

The dominant theoretical model in health education today, the health belief model, was developed in the 1950s by a group of social scientists working for the US Public Health Service. Their motivating concern was people's failure to take the preventive health measures that the government thought necessary. By mapping an individual's belief system, they hoped to develop interventions that would convince people to seek services they would not otherwise choose to use (4).

The most recent manifestation of this kind of health education is the workplace health promotion/disease prevention programmes. These efforts, usually sponsored by industry or government, seek to change the eating, smoking, or exercise habits or the responses to stress of the "captive population" of the workplace. Industry's goals are to cut health care costs, to reduce absenteeism, to improve employee morale and fitness and, ultimately, to increase productivity (5,6). Most of these programmes avoid any attempt to remedy occupational safety and health problems.

Health education for social change

One cause of the difficulty in creating a broader practice is that the narrow definitions of health education that proponents of individual change put forth have often been accepted without challenge. But, if one defines health education more broadly - as those efforts that educate and mobilize people to create more healthful environments, institutions and policies (as well as lifestyles) - one can find a rich tradition of health education for social change.

A few examples illustrate the scope of this history. Between 1910 and 1920 Dr Alice Hamilton, the founder of occupational medicine in this country (and also a socialist and feminist), investigated health conditions in the lead and mercury industries. When employees refused to allow her on their premises, she set up clinics in the back rooms of bars and social clubs. Not only did she examine workers for evidence of disease, she also instructed them on how to protect themselves against toxic exposures and she lobbied forcefully for stricter regulations of these metals (7).

Around the same time, the first neighbourhood health centre movement led to the creation of community clinics in cities around the country (8). In Milwaukee and Cincinnati, where the Socialist Party had strong chapters, these centres became focal points for community organizing and education. In the Mohawk-Brighton neighbourhood of Cincinnati, for example, residents elected a citizen's council which planned health centre activities, conducting educational campaigns against tuberculosis, influenza and infant mortality and training local residents as educators (9).

In the early 1960s a group of scientists became concerned about the health effects of atomic weapons testing. Their public education on the impact of strontium 90 on children's health led tens of thousands of outraged parents to write letters to their Congressional representatives demanding an end to above ground atomic testing. This pressure helped force the United States and the USSR to sign the 1963 test ban treaty. According to estimates by experts, radioactive fallout from atomic weapon testing prior to 1963 had caused about 5000 defective births in the United States and 86 000 throughout the world. As a result of the test ban treaty, the fallout radiation burden borne by human beings fell, in the case of strontium 90, 8 to 10 fold (10). While no one has conducted a rigorous outcome evaluation of this health education campaign, these estimates suggest impressive results for an effort sustained by a group of volunteers.

Today, the practice of health education for social change is defined by the social movement of the last twenty years - the civil rights and black struggles, the women's movement, the occupational safety and health movement, the environmental movement, the anti-nuclear power movement, and most recently, the peace movement. Each has attacked some fundamental cause of disease and each has accumulated experience and lessons for health educators and other public health workers.

For example, in January 1981, the City of Philadelphia enacted the nation's first municipal Right-to-Know law. The new regulation gave workers and community residents the right to know the names of chemicals used, manufactured, stored or released into the air and also their health effects. Its passage marked the culmination of several years of community and workplace education and organizing by the Delaware Valley Toxics Coalition (DVTC).

Realizing the need to move beyond these piecemeal fights, DVTC leaders organized a coalition of tenant associations, environmental groups, Vietnam veterans concerned about Agent Orange, senior citizens and union members. Among their educational methods were demonstrations at polluting companies, testimony of victims of poisoning at public hearings, and written reports by scientists, physicians and epidemiologists. They developed a flair for using the media creatively. At one city council hearing, a union member who was appearing in support of the bill sprayed an unmarked canister into the chamber. "Stop that", the legislators shouted, "you're poisoning us". The unionist replied, "this can has only air, but everyday we have to work with chemicals we know nothing about". His testimony made headlines in the local paper. In part as a result of the victory in Philadelphia several other cities and states have passed right-to-know laws (11).

The second example also involved a workplace setting. A United Automobile Worker's member in a model building shop noticed that several of his workmates were coming down with cancer and suspected that exposure to one of the many chemicals used in the shop might be responsible. He organized his local to ask for help from the national union, and with the assistance of an epidemiologist, workers themselves collected data for a proportional mortality study. The results were used to identify several chemicals that might be responsible for the higher rates of cancer and eventually improvements in ventilation were made. Subsequently, the UAW developed a handbook, "A manual for cancer detectives on the job", which teaches members across the country how to conduct an investigation, file a complaint and bargain for health and safety (12).

The third example took place in New York City. In the mid-1970s a group of feminists and Black and Hispanic activists became concerned at frequent reports that low income women had been sterilized without understanding that the procedure was permanent or even without their consent. Subsequent research showed that more than 35% of all women of childbearing age in Puerto Rico and 25% of native American women, nationwide, had been sterilized. In New York City, twice as many Black and six times as many Hispanic women were sterilized in municipal and voluntary hospitals as compared to the number of white women sterilized.

The Committee to End Sterilization Abuse (CESA), formed to remedy the problem the activists had uncovered, decided to act. First, they lobbied the New York City municipal hospital system to adopt guidelines calling for a detailed explanation of the procedure in the women's native language, a 30-day waiting period between consent and surgery, and limits on sterilizing younger women and those incapable of giving informed consent. Using educational forums in low income communities, seminars for health professionals, and lawsuits against those who had operated without any consent, CESA generated enough pressure to implement the new rules. Soon after, the New York City Council was persuaded to pass a bill mandating these same guidelines for all the city's hospitals. And in 1978, the US Department of Health, Education and Welfare passed a similar set of national rules (13).

What distinguishes the kind of health education illustrated by these examples from the more traditional model? First, health education for social change addresses the multiple causes of illness - social, economic, political and environmental as well as behavioural. It recognizes that health problems are embedded in a context that includes the individual, the community and society. Effective interventions are based on analyses of determinants at each of these three levels.

Second, health education for social change uses a variety of strategies. The three examples described earlier relied on mass media, canvassing, demonstrations, legal action, lobbying, and face-to-face counselling. Each intervention enhances the contribution of the other. One-dimensional programmes cannot expect to remedy multi-determined problems.

Third, this health education approach addresses people's day-to-day concerns. Auto workers did not need to be persuaded to find out if their work was making them sick (although they did need help in deciding what to do about it without losing their job). Philadephia residents who had been exposed to toxic substances did not need to be convinced that they needed more information on these hazards. By addressing problems people themselves have identified, one eliminates the task of persuading them to do something that professionals think is good for them.

Finally, health education for social change is rooted in popular struggles for social justice. The women's movement, the occupational safety and health movement and the environmental movement have all fought for specific changes in health policies and institutions. But their primary goal is to create a more humane, democratic, healthful and just society. Their specific objectives can lead to victories that make concrete improvements in people's lives; for example, a case of cancer prevented or a woman getting the information she needs to choose an alternative to sterilization. But the vision of a better world helps to sustain people in the long run, to get them through the hard times and frustration inevitably encountered in efforts at change. By closely linking these two levels of goals, health educators can tap into a powerful current of popular energy.

The main impetus for these social changes has come from ordinary people who have organized themselves into a political force. But in each case health professionals have also played a valuable role. How can public health personnel be trained to work more closely with those challenging the health-damaging forces in our society?

Training public health workers for social change

The current emphasis on graduate education in public health is on the technical, administrative, fiscal and quantitative aspects of the field rather than on political, social, economic and qualitative factors. Both the content of this education and its process need to be reexamined. The goal in content should be to prepare students who can analyse the panoply of causes of today's health problems; develop, implement and evaluate interventions that address these causes; and overcome at least some of the political obstacles that block action for health.

Epidemiology is health educators' most basic analytical tool. Epidemiological methods are used to define the cause of health problems, to choose priorities among and within programmes, and to evaluate interventions. Training in epidemiology needs strengthening in several directions. First, the one dimensional cause-effect thinking that more than a century of infectious disease epidemiology has instilled needs to be superceded. While investigators of chronic disease have begun to look for multiple risk factors, it has been difficult to teach health education students how to use these methods in the real world. Certainly, methodologies for understanding the ecology of a disease in a specific community are still lacking.

Second, and perhaps more easily remedied, health educators need more training in social epidemiology. They need to be able to analyse, for example, the specific ways that class, race and sex interact to cause or aggravate health problems. If diseases can be linked to particular historical or social circumstances, it will be possible to advocate policies that change these conditions. An example is the still controversial work of Brenner linking a variety of physical and mental illnesses to swings in the business cycle (14). Is it not the job of an educator for health to inform the public that the choice of one economic policy over another will be likely to lead to X number of excess psychiatric admissions or Y number of homicides and suicides?

Realistically, epidemiologists will never have the resources to conduct all the rigorous studies needed to develop solidly grounded health education programmes. So students also need to know how to carry out their own epidemiological needs assessment. In communities across the country, concerned residents have conducted health surveys to help them decide whether a toxic waste dump or a polluting factory posed a threat to their health (15). While these do not replace the need for more sophisticated research, they can provide guides for action in the face of uncertainty. Sidney and Emily Kark, in their work in Jerusalem (16) and John McKnight in Chicago (17) have developed other methods for involving a community in collecting data and analysing its health problems. Health education students need to become more skilled in this "barefoot" epidemiology. They need practice in applying epidemiological methods to small populations and community settings - a task that would be aided by more training in biostatistical methods and power analysis.

A second major area of health education curriculum that needs scrutiny is the teaching of health policy and health care administration. Many schools are offering more and more courses in accounting, budgeting, human resource management, cost-benefit analysis and fund raising. Obviously, professional health educators need some of these skills and it makes sense to prepare students for the demands of the job market. But there is a price to pay for letting the market shape training programmes - a price that can hurt both graduates and the health of the public. One consequence is that schools graduate managers who know how to budget, plan, evaluate, cost out and look at the bottom line but are incapable of understanding the broader forces that influence their organization or their community. In their zeal to take care of their own tree, they do not notice that the forest is being bulldozed.

What administrators and educators need to know is how health policy is shaped, how national policies get translated down to a particular institution and how public health professionals, acting in concert with citizens, can influence policy. They need to learn different strategies for political change and how to decide when to use each one. The effective manager knows how to rabble rouse in the community as well as how to write a budget, how to get a bill through the legislature as well as how to supervise employees. Without an understanding of the political context in which they work, administrators are forced to accept as unchangeable everything that is outside their limited authority. Their choice becomes either to carry out orders passed on from above or, at best, to use the minimal power they have to shift scant resources from one area of need to another.

Another aspect of policy that needs more attention in training programmes is the relationship between nonhealth policies and health. For example, how do national policies on nutrition, energy, housing, the environment and defence affect the wellbeing of the American people? In a democratic society, people have the right to participate in choosing the direction society is to take, but this right is meaningless unless citizens know the consequences, including the health impact, of alternative policies. The anti-nuclear power movement illustrates how such education can make a difference. It was public education on the health and safety hazards of that industry by anti-nuclear activists that launched a movement that has helped to slow, if not stop, the growth of nuclear power. At the local level, health educators need to understand, for example, how housing code enforcement affects lead poisoning rates or how policies on parks influence people's ability to exercise.

As professionals responsible for educating people about health, health educators need to be able to analyse the effects of different policies on wellbeing and to present these options to the public. This will require working with experts from a variety of disciplines and more systematic training in political theory and planning as well as at least an introduction to nutrition, environmental sciences, military policy and so on. One example of such training is provided by courses on the medical and health aspects of nuclear war that several schools of public health and medicine have added to their curriculum in recent years, indicating a growing recognition of the need to involve health personnel in preventing "the final epidemic" of nuclear war.

Health education for social change also requires a different kind of teaching than what Paulo Freire, the Brazilian educator, has called "banking education", in which the teacher deposits knowledge in the learner's head where it can be withdrawn on demand (18). One goal of health educators is to help people learn from their own experience and analyse the world so as to change it. Thus, students need to study new pedagogical methods and learning theories other than those of the behaviourists or the social psychologists who see the learner as an object rather than a subject.

A small but growing body of health education literature provides case histories of interventions using innovative pedagogical methods (19-23). In addition, colleagues in Africa, Asia and Latin America have a rich experience in helping people and communities to learn how to make improvements in their social conditions. Health educators can also borrow from the fields of adult education, literacy education and community development whose practitioners and researchers have developed relevant critiques of formal education. Still another source of new ideas is the social movements described earlier. The consciousness-raising group of the women's movement has been a powerful force for change in many women's lives, while participation in direct action has strengthened the motivation and commitment of activists in the civil rights, anti-nuclear power and peace movements. Almost single-handedly, the battered women's movement has brought a major social problem to public attention and changed how we think about this formerly hidden violence (24). A better understanding of the educational processes these movements have used would help health educators to emulate their success.

Training programmes also need to teach new methods of evaluation. Health education strategies aimed at individual behaviour are based on the medical model: interventions seek to correct the behaviour that "causes" the disease. As a result, evaluations of these programmes depend on the building block of scientific medicine, the randomized clinical trial. According to the academic advocates of behaviour change, scientific health education requires the accumulation of a body of literature that documents with ever greater quantitative precision the health outcomes our programmes have produced and the dollar costs of these benefits. While the rational use of scarce resources requires some way to compare the benefits of different inputs, health educators limit themselves unnecessarily by insisting on quantitative outcomes. Too often the evaluation tail wags the programme dog as practitioners choose objectives amenable to evaluation. If the goal is to change institutions, policies or environments, then it becomes difficult to find relevant numerical measures. One solution is to borrow methods from the social sciences such as the participant-observation from anthropology, the case history from political science and the qualitative research strategies of sociology. These are as valid in their terms as the quantitative techniques of the biomedical sciences. In fact, health educators have always employed these methods but students need to be kept up-to-date in their use. By expanding the repertoire of techniques for assessing outcomes of interest, training programmes can broaden students' ability to develop programmes that improve the health of the public.

Visions of the future

The decisions we make in our training programmes in the next few years will shape the direction of health education for decades to come. I offer two visions of health education in the year 2000. In one, health educators will be the operatives of corporate America. Every workplace will have a health promotion programme that will target for mandatory behaviour change smokers, those who drink too much and the addicts of any new vices that emerge. Penalties in the form of higher health insurance rates and loss of benefits that depend on "clean living" will provide additional incentives to join these programmes.

Most public health education will be turned over to the private sector. If the Reagan Administration has its way, the food industry will be reponsible for nutrition education. Fast food companies will tell us how to eat right while drug companies will prepare their own package inserts with minimal review by the Food and Drug Administration. Health educators employed by the alcohol industry will promote "responsible drinking".

Within the health care system, health educators will have two functions. The first will be marketing and public relations. Their job will be to bring in enough paying patients to keep the books in the black. Those community programmes that do exist will seek to demonstrate that the hospital really does care about the community - so if one happens to need an appendectomy or a heart transplant - do drop by. Their second function will be to carry out those tasks that increasingly specialized physicians have no time for, talking to patients, for example. Compliance with prescribed medical regimens will be the outcome of interest and the justification for continued employment will be educators' ability to increase clinicians' productivity.

Training programmes in this vision will also look different. Schools of public health will share faculty and resources not only with medical schools but also with business schools. As universities turn more and more to corporations for financial support, their influence in shaping the curriculum will grow. Just as some professors in biology and biochemistry now divide their time between the classroom, the laboratory and the boardrooms of new high tech companies, so health education faculty will work part-time for General Foods, General Motors or the Hospital Corporation of America. Increases in tuition and reductions in student assistance will make our profession and its leadership increasingly white, male and middle class.

The other vision is of a health education practice rooted in people's daily struggles for a better world. Health educators will work for community groups, labour unions, environmental organizations, public interest groups as well as hospitals, clinics and health departments. Organizations that cannot get outside financial support will collect dues from their members, as many citizen action and public interest groups already do, enabling them to hire staff.

Health educators will use their skills to help people win greater control over their lives - a fundamental prerequisite for health. They will work with the movements that have already done so much to educate the public about health - adding their expertise and in turn accumulating a practice that can provide the foundation for new theories. Students will reflect the multicoloured, multitongued peoples of this nation and training will give them the competencies they need to work for a social and economic system that promotes health and justice.

Which of these visions will be realized depends on what health education faculty, students and practitioners do tomorrow, next week and next year. In turn, their decisions will determine the contributions that health educators will make to the future wellbeing of the American people.

REFERENCES

1. Bowles, S. & Gintis, H. Schooling in capitalist America. New York, Basic Books, 1977, pp. 164-173.
2. Page, J. & O'Brien, M.W. Bitter wages. New York, Grossman, 1973, pp. 50-59.
3. Berman, D. Death on the job. New York, Monthly Review Press, 1978, pp. 21-23.
4. Rosenstock, I. Historical origins of the health belief model. Health education monographs, 2: 328-335 (1974).
5. O'Donnell, M. & Ainsworth, T. Health promotion in the workplace. New York, Wiley, 1984.
6. Parkinson, R. et al. Managing health promotion in the workplace. Palo Alto, CA, Mayfield, 1982.
7. Hamilton, A. Exploring the dangerous trades. Boston, MA, Little, Brown & Company, 1943.

8. Rosen, G. *From medical police to social medicine*. New York, Neal Watson Academic Publications, 1974, pp. 304-327.
9. Dinwiddie, C. & Kreidler, A. A community self-organized for preventive health work. *Modern medicine*, *1*: 26-31 (1919).
10. *Report of the UN Scientific Committee on the effects of atomic radiation*. New York, 1969.
11. Chess, C. *Winning the right to know*. Delaware Valley Toxics Coalition, 1983.
12. United Auto Workers. *The case of the workplace killers: a manual for cancer detectives on the job*. Detroit, 1981.
13. Committee for abortion rights and against sterilization abuse. *Women under attack: abortion, sterilization abuse and reproductive freedom*. New York, 1979.
14. Brenner, M.H. Health costs and benefits of economic policy. *International journal of health services*, *7*: 581-623 (1977).
15. Freudenberg, N. *Not in our backyards. Community action for health and the environment*. New York, Monthly Review Press, 1984.
16. Kark, S. *Epidemiology and community medicine*. New York, Appleton-Century-Croft, 1974.
17. McKnight, J. Politicizing health care. *Social policy*. Nov-Dec: 36-39 (1978).
18. Freire, P. *Pedagogy of the oppressed*. New York, Herder and Herder, 1972.
19. Minkler, M. & Cox, K. Creating critical consciousness in health. *International journal of health services*, *10*: 311-322 (1980).
20. Minkler, M. Applications of social support and theory to health education: implications for work with the elderly. *Health education quarterly*, *8*: 147-165 (1981).
21. Roter, D. et al. Community-produced materials for health education. *Public health reports*, *96*: 169-172 (1981).
22. Freudenberg, N. & Kohn, S. The Washington Heights health action project: a new role for human service workers. *Catalyst*, *13*: 7-23 (1982).
23. Clark, N. et al. Developing education for children with asthma through study of self-management behaviour. *Health education quarterly*, *7*: 278-297 (1980).
24. Schechter, S. *Women and male violence*. Boston, South End Press, 1982.

VI. MOVING TOWARDS NEW PRACTICE

THEORY AND ACTION FOR HEALTH PROMOTION: ILLUSTRATIONS FROM THE NORTH KARELIA PROJECT[a]

by
Alfred McAlister, Pekka Puska, Jukka T. Salonen
Jackko Tuomilehto and Kaj Koskela

Abstract

The North Karelia project in Finland illustrates the fundamental goals of health promotion. Specific activities of the project serve as examples of how concepts from the social and behavioural sciences can be applied to achieve estimated reductions in predicted risk of disease. The results in North Karelia are not conclusive, but they are encouraging, and the investigation conducted there is an essential reference for future research in health promotion and disease prevention.

Introduction

The prevention of chronic diseases has emerged as a major focus of modern public health (1,2). Present knowledge indicates that adoption of healthy lifestyles and environments are key elements of such preventive action. "Health promotion" is the effort designed to reduce unhealthy behaviours, improve preventive services, and create a better social and physical environment (3,4). The obvious potential for prevention of several major chronic diseases has led to many campaigns and actions. Disappointment with the frequently marginal or unsatisfactory results has increased demand for a sounder theoretical basis for these health promotion activities. There is also a need for more communication between those involved with action and experts in the behavioural sciences. We believe that "nothing is as practical as a good theory" (5), and that a comprehensive framework of theorization is urgently needed to guide research and development activities in this important field.

The North Karelia Project (6) is a comprehensive community programme for health promotion in North Karelia, a rural county with 180 000 inhabitants in eastern Finland. Most of the inhabitants of the region reside in very small villages. The largest population centre, Joensuu, is a small town. Chief occupations in North Karelia are farming and forestry. The project was started in 1972 after a petition by the local population requesting the government to do something to reduce high cardiovascular disease (CVD) rates in the area (7). The aims of the programme have been to improve detection and control of hypertension, to reduce smoking, and to promote diets lower in saturated fat and higher in vegetables and low-fat products. The following sections provide conceptual and theoretical analyses of these goals with reference to activities of the North Karelia Project.

---

[a] This article was published in the American journal of public health, 72(1): 43-50 (1982).

Activities of the project were based on practical ideas of how to improve services and change behaviours and environments. However, most of the subprogrammes that were conducted demonstrate the fundamental goals of health promotion and illustrate theoretical principles in action. This paper is not intended as a description of the North Karelia Project and its results; a comprehensive report has been published by the World Health Organization (7). The aim here is to present a framework of general goals and theoretical principles for health promotion, and to illustrate their application with examples from the North Karelia project.

Programme objectives

There are several general models that may be applied to the design of health promotion programmes (8-11). The general framework presented here is compatible with these models, but our schemata emphasizes planning and analysis based on the classification of objectives:

- *improved preventive services* to identify persons at abnormal risk of disease and provide appropriate medical attention;
- *information* to educate people about their health and how it can be maintained;
- *persuasion* to motivate people to take healthy action;
- *training* to increase skills of self-control, environmental management and social action;
- *community organization* to create social support and power for social action;
- *environmental change* to create opportunity for healthy actions and improve various unfavourable conditions.

The following sections provide conceptual and theoretical analyses of these goals with reference to activities of the North Karelia project.

Improved preventive services

Provision of preventive services is a key function of any health care system. Detection and treatment of hypertension as a means of preventing cardiovascular disease is one of the best examples of this kind of activity (12). Large-scale detection and control of hypertension has proved to be difficult. The greatest problems are accomplishing widespread blood pressure screening and inducing adequate adherence to indicated treatment and follow-up (13,14).

The North Karelia project approached these problems with the notion that it would be more feasible to reorganize preventive services than to induce the population to use existing services more effectively. The Finnish health care system provides primary care through community health centres serving and largely governed by local populations. Only a small minority receive routine care from private physicians. Sponsored by the National Board of Health, the North Karelia project worked together with the County Health Administration and local municipal authorities to change the way in which hypertension was detected and treated (15).

The central features of this reorganization were a sharp increase in the responsibility assigned to the local public health nurse and the establishment of new offices at each of the 12 community health centres in North Karelia. To provide the data base for the new activities a county-wide hypertension register was established. Screening for hypertension was integrated into routine contacts with the health centre and also provided through mass screening programmes at county fairs and village centres. Public health nurses were trained to refer those with elevated blood pressure to a physician for definite diagnosis and for possible initiation of appropriate pharmacological regimens. Then the public health nurse was given responsibility for long-term surveillance of those patients' blood pressure through regular follow-up, including personal instructions on adherence to the treatment and on necessary modification of dietary and other habits. The public health nurses paid special attention to individuals who seemed to experience difficulty in bringing their blood pressure under control. Meanwhile, media and community organizations were spreading the message that control of hypertension is an important goal and that individuals should cooperate with the new activities of the public health nurses. Regular mailings of highly salient reminders of follow-up visits were sent to all the persons recorded in the hypertension register maintained by the public health nurse.

At the baseline survey in 1972, the proportion of male hypertensives (systolic $\geq$ 175 mm Hg or diastolic $\geq$ 100 mm Hg) receiving anti-hypertensive drug treatment was about 13% in both Karelia and a neighbouring province which was used as a reference for comparison. In the 1977 survey conducted after five years of reorganized preventive health services in North Karelia, the proportion of male hypertensives under appropriate drug treatment had increased to 45% (16). In the neighbouring province, where services for hypertension detection and treatment were beginning to be modelled after the new procedures in North Karelia, the corresponding change was from 14% to 33%. The proportion of hypertensives dropped sharply among North Karelian middle-aged men (30-64 years) while it increased slightly in the reference area. These findings are more completely described elsewhere (7).

Information

Cooperation with any programme or service designed to prevent disease depends on the extent to which the community is informed about the purposes and importance of the programme. Thus a major objective of health promotion is to educate people about their health and how it can be maintained. Examples of this kind of activity are informing the public that cardiovascular disease may be prevented through appropriate measures and explaining the purpose and nature of these measures. However it is not always easy to adequately communicate new and somewhat complex ideas in a large population which is subject to information, sometimes conflicting, from many sources.

The design of effective information campaigns can be facilitated by the application of practical principles derived from communication research and theory. For example, research shows that mass media, especially news, powerfully influence what people talk and think about and how they judge the importance of various social problems or issues (17). Theory suggests that new ideas often must travel through several steps of interpersonal communication to reach the general population (18). The messages must be simple and frequently repeated if they are to be comprehended and retained (19).

The North Karelia project offers several illustrations of the implementation of these principles. Project staff were able to attract intense and frequent attention from the news media in the region, especially from newspapers and radio. Between 1972 and 1977, a total of 1509 articles related to cardiovascular risk factors, their management and the programme activities were printed in the local newspapers. This was three times as many articles as appeared in the reference area papers. During that same period, over half a million bulletins, leaflets, posters, signs, stickers and other educational materials were distributed. To stimulate further interpersonal communication, many different groups and organizations were contacted and asked to distribute materials in their everyday work or to cooperate in organizing health education meetings. A total of 251 general meetings, reaching over 20 000 community members, were held. The community groups and organizations that were involved in these activities included worksites, schools, shops and places of commerce, clubs and voluntary organizations.

Information about the programme and its aims was disseminated rapidly (7). According to population surveys, over a five-year period understanding of the risk factors for cardiovascular disease increased in both North Karelia and the reference area, but somewhat more in North Karelia. There were sharp baseline differences in knowledge between different educational and occupational groups, but members of all the different groups in North Karelia showed 10-15% increases in the proportion of correct responses to survey questions designed to measure knowledge, awareness and understanding of cardiovascular disease risk factors. However, there were no significant differences between such changes in North Karelia and in the reference area, probably because of increasing attention from the national media serving both counties.

Persuasion

It is well known that behaviour cannot always be changed simply by providing information (20). People need to be persuaded to act on the information that they have been given, to be convinced that new ideas are socially acceptable, that new foods are tasty, and that new lifestyles are enjoyable. Thus, in order to promote health effectively, we must accept responsibility for shaping attitudes and behaviour in what we believe to be the proper direction.

Much has been written concerning the ethical issues that arise in persuasive health promotion (21). Debate has been centred on the right of public health activists to interfere with existing processes and on the question of whether individuals or groups should be held responsible for their own health (23). The promotion of change in lifestyle or environment is a natural outgrowth of an improved understanding of the epidemiology of disease and injury. Given the many forces which already exert persuasive influences on individuals in our society, those concerned with public health should not shirk the duty of prudent advocacy. To do otherwise is to leave attitudes and behaviours to be shaped by the short-term contingencies of our market economy.

We are products of our environment, but we can change our environment through concerted action. Thus, we may be held collectively responsible for public health, and we must learn to use our political system more effectively to create a favourable environment for all segments of society if we hope to limit the current burden of illness. Efforts to persuade those whose options are limited and whose values are distorted by economic and social problems to accept responsibility for their own health may be futile. Yet many public health activists seeking basic social or economic change are acutely aware of the difficulty of winning popular support for their views and recommendations.

There is a broad accumulation of research and theory concerning the social psychology of persuasion (24). Three general approaches can be described.

- The "communication" approach focuses on basic parameters of communication; it emphasizes the credibility of the source of a persuasive message and how the message form or content influences cognitive processes in a human receiver.

- The "affective" approach to persuasion concentrates on creating emotional associations.

- The "behavioural" approach centres on achieving a minor behavioural commitment with the expectation that attitudes and beliefs will follow (25). Although attitude change was not a stated objective of the programme in North Karelia, several basic principles were taken into account when different activities were conducted.

In communicating new ideas, project staff arranged for their messages to be disseminated from many different sources - deliberately seeking a mix which would maximize perceived credibility. Explicit endorsements were obtained from prestigious institutions such as the World Health Organization. In addition, opinion leaders from both formal and informal groups were involved (26). These individuals were targets of especially intense persuasive communication from respected medical and other experts and were then encouraged to spread and support the new ideas in the community. The physicians and public health nurses were an important part of the communication system. The surveys showed that during the five-year period both of these professional groups distributed more information and were much more involved in active contacts with decision-makers in various community organizations in North Karelia than in the reference area: 8% of the decision-makers in the reference area and over 20% in North Karelia had been explicitly advised by a public health nurse to change dietary habits (7).

The content of the messages was carefully constructed to anticipate and suppress counter arguments. Since many local people, engaged in active occupations, strongly believed that a diet high in meat fat was necessary for hardworking individuals, messages aimed at decreasing fat intake often pointed out that there were hardworking vegetarian lumberjacks and that one of the most famous distance runners from Finland, H. Kolemainen, was a vegetarian. Reference was also repeatedly made to the fact that the recommended low-fat diet was more "traditional" for North Karelia than the present high-fat diet. Comparisons of changes in dietary habits in North Karelia and the reference area revealed that sizeable and significantly greater reductions were observed in reported intake of fat in North Karelia than in the reference area (7).

Realizing that any fear provoking messages must be accompanied by clear and attainable recommendations for reducing that fear, the project was careful with the "high risk" concept. People with elevated blood pressure or serum cholesterol were told that their condition was potentially serious, but that simple steps could be taken to alleviate the problem. Practical dietary advice was given, and the high-risk individuals were systematically reassured at the follow-up. No distinction was made between "pathological" and "safe" levels of risk, and public health nurses and educators repeatedly pointed out that the general risk in the population was high - that everyone had reason for change. The surveys showed that the behaviour changes were similar among population groups with varied initial risk levels, and that there was no tendency towards increased anxiety or psychosomatic complaints as a result of the efforts to identify and influence those with exceptionally elevated risk factors (27).

The "emotional" approach to persuasion relies upon emotional association rather than argument. There was conscious effort by the project to associate the goals of the project with the pride and provincial identity of the population. People were urged to participate and to make changes not only for themselves, but for "North Karelia". For instance, signs reading "Do not smoke here - we are in the North Karelia project" were everywhere and fostered a kind of local patriotism.

The "behavioural" approach to persuasion also does not rely on rational argument. The project staff became acquainted with hundreds of local influential people with whom problems of varying nature were discussed. Almost everyone directly contacted was asked to make at least some minor behavioural commitment in favour of the project. Thousands of citizens cooperated with small actions such as the display of stickers and posters. Such actions undoubtedly influenced the involved individuals to take a more favourable view of the project and its recommendations.

Training

Information and persuasion are often sufficient to promote simple behavioural change such as choices among similar, equally accessible consumer products like butter and margarine. But when complex changes in habit or lifestyle are recommended, it is not always easy to translate intention into action. For example, adding more vegetables to the family diet may require the homemaker to change long-standing patterns of shopping and preparation. Even when the family is persuaded that such changes should be made, they may find the transition difficult. The cessation of cigarette smoking provides another example of the difficulty of some actions (28).

There is a fairly well articulated body of research and theorization that can guide the creation of training programmes to facilitate the learning of new habits and skills (20). Four basic steps appear necessary for optimal training: (a) modelling or demonstration of new responses and action patterns; (b) guided and increasingly independent practice in those thoughts and behaviours; (c) feedback concerning the appropriateness or accuracy of responses; (d) reinforcement in the form of support and encouragement that can be gradually withdrawn if the new habit or skill leads to naturally reinforcing consequences. Illustrations of these steps can be drawn from the training course in dietary change that was conducted in the North Karelia project.

Especially in rural Finland, most women occupy the traditional role of homemaker and in eastern Finland many women belong to a local housewives' association known as the "Martha" Organization. In order to teach new cooking and food preparation skills and thus to change family diet, the North Karelia project worked in cooperation with Martha leaders. A major practical activity here was the introduction of "Parties for a Long Life". Housewives of the village gathered in the afternoon to learn how to cook a healthier type of meal with actual demonstration and participation. For example, women were shown how potatoes and other roots can replace meat fat in soups, while still producing acceptable appearance and consistency. Guidance and feedback was presented by the course leaders as the new skills were practiced. The rest of the families were invited in the evening to enjoy the meal with them, creating good opportunities for natural reinforcement. A pleasant social programme was then organized in conjunction with the meal. To increase the perception of natural incentives, participants were shown that the cost of the meal was less than that of their traditional way of preparing these dishes.

Three hundred and fourty-four of these sessions were held with approximately 15 000 participants. At the 1976 follow-up survey, 9% of the men and 18% of the women in North Karelia had been involved at least once. Since then, the "Party for Long Life" has become a part of the activities of the Martha Association on a national basis. A variety of other forms of training were conducted, including smoking cessation classes and special coronary rehabilitation groups. These are more completely described elsewhere (7).

Community organization

No matter how effectively a person has been educated, persuaded and trained to make healthy changes in behaviour, it is unlikely that the change will be maintained unless it is reinforced by the social environment. One of the central ideas, and probably the most important concept of the project in North Karelia, was to involve the whole community in a broad effort to prevent cardiovascular diseases. A variety of supportive activities were organized. They provide good examples of how members of the community can be trained and organized to reinforce the changes that were being recommended.

Support within the family was created by involving the complete family unit wherever possible, e.g. inviting the husbands and children to share in the results of cooking classes, or enlisting the support of wives in their husbands' adherence to smoking cessation courses, anti-hypertensive regimens, or coronary rehabilitation courses. Wives of smokers were informed about how to deal with nervousness on the part of a recent ex-smoker and how to be patient and reinforcing as their husband learned to live without cigarettes.

Special efforts were made to create general support within the community, based upon the well known sociological phenomenon of natural leadership in social networks of the community (29). The project staff, jointly with the Heart Association, identified local leaders by informally interviewing shopkeepers and other knowledgeable persons. They inquired about individuals who regularly have influential contacts with a large number of practical activities. Those who agreed to participate in the "lay leaders" programme were invited to a weekend programme of training which included basic information about risk factors for cardiovascular disease and suggestions on how to encourage positive changes in day-to-day contacts with people. Participants in these brief courses were also educated about the new activities that were being conducted by the health centres and given advice on how to encourage cooperation among their families, friends and acquaintances. Finally, these natural leaders were told that they were models for the rest of the community and urged to be positive examples by following various recommendations themselves. This activity was started towards the end of the five-year period and was continued after that. Over a four-year period more than 1000 of the most influential members of the local communities in North Karelia were involved in this local organizational work.

Environmental change

The environment is often a determining influence on behaviour and may be a direct influence on health. Thus a very important goal of health promotion is the achievement of appropriate environmental changes. Community organization is an important element of such change. Both governmental and economic organizations tend to be most responsive to organized, collective actions (30,31). Various concepts and theories of social influence and change suggest both direct influence and advocacy among decision-makers (32) and indirect influence through the organization of "grass roots" support and action (33).

The major environmental goals of the North Karelia project were to increase the availability of low-fat foodstuffs and to introduce restrictions on smoking in many indoor spaces such as restaurants. Direct advocacy of those goals was accomplished through individual meetings with crucial individuals. For example, shop proprietors were individually asked to display signs which prohibited smoking in their shops. Management of a local sausage factory was particularly interested in cardiovascular disease prevention after two managers suffered heart attacks. The project staff took advantage of their offer of cooperation by helping to create a new sausage product which replaced some meat and fat with mushrooms. Especially important was the assistance of the main county dairy in promoting the consumption of low-fat dairy products. Through this cooperation some entirely new products were created.

Indirect influence was organized out of the many contacts between North Karelia project staff and influential members of the community. The weekend courses for natural community leaders involved discussions of how useful environmental changes could be accomplished, and participants in these meetings were asked to accomplish specific objectives. For example, local restaurants and shops were visited by local leaders, who asked the proprietors to offer additions to the food products on sale, to prohibit or restrict smoking, and to remove tobacco advertisements.

A particularly powerful form of indirect influence on environmental change is the creation of consumer demand for new products or services. The educational and persuasive activities of the North Karelia project stimulated increased demand for low-fat food products. When a survey showed that more than half of the population of North Karelia would buy low-fat milk if it were available, that fact was persuasively communicated to those responsible for the production and distribution of dairy products. In response, the dairy agreed to produce nonfat milk and other new products and joined with the project in promoting those new products. Dairy sales were sustained without increasing costs.

The proportion of people in North Karelia who regularly drink high-fat milk dropped by almost 40%. However, this development took place in the whole country, so that in the reference area similar but smaller shifts away from high-fat milk consumption were observed. Other environmental changes that were stimulated by the North Karelia project also spread throughout Finland. A special soft butter (mixed butter and vegetable oil), introduced by the project in connection with the "Parties for Long Life", was made available to all Finns as a result of legislative actions in 1978. The voluntary restraint on tobacco promotion that was evoked in North Karelia became a national law in 1977 with the passage of national legislation prohibiting the promotion of tobacco products.

Summary of five-year results

Selected examples of the results achieved in North Karelia have been mentioned throughout this paper and full reports of intermediate and primary outcomes are available elsewhere (7). Only a brief summary of the risk factor changes that were observed will be presented here. Because of the tendency for longitudinal study of cohorts to exaggerate estimates of change in the whole community (34), the project evaluation relied upon independent surveys of population samples drawn from the national population register. In 1972, a baseline survey was conducted in which a total of 5115 men and women between the ages of 25 and 59 were sampled in North Karelia and 7348 were sampled in the reference area (neighbouring county). Excluding those who had died or migrated out of the area, well over 90% of those asked to respond were studied. In 1977, a five-year follow-up survey was made in which 4728 new persons were sampled from North Karelia and 6776 were sampled in the reference area. Response rates were again around 90%. Both of these surveys included similarly structured questionnaires and direct risk factor measurement using standardized techniques. Smoking was measured by a set of questions; the reported answers were validated at the terminal survey by analysing the serum thiocyanate levels of a random half of subjects. Casual blood pressure was measured in sitting position using standardized techniques; the fifth phase was used as diastolic blood pressure. Serum cholesterol assessments were made in one central laboratory standardized against the WHO reference laboratory in Atlanta. An overall risk score was computed for each subject using a multiple logistic function based on their smoking, serum cholesterol and systolic blood pressure values (7).

Changes in risk estimates for smoking, serum cholesterol, blood pressure and total risk are presented in Table 1, showing significant reductions in North Karelia when compared to the reference area. A more detailed discussion of the evaluation efforts of the project can be found in the WHO report (7).

Five years is obviously not a long enough period of time to reduce cardiovascular morbidity and mortality, but some changes have been observed (35). There are good data from national records of pension disability payment, and a clear relative reduction in cardiovascular disease pension was observed in North Karelia as compared to the reference area (7). Estimates from pension disability data already suggest that payment of over US $4 million in disability payments may have been avoided by the less than US $1 million expended on the project's intervention activities.

We realize that the observation of only two statistical units (counties) and the absence of random assignment of the intervention limit the certainty of inferences that may be drawn from this study. Given the origin of the project, randomization was clearly out of the question. However, the reference area was chosen in a "matched" way. Because the possible impact of the project on the reference area is not taken into account, and a new medical school was opened in the reference area in 1972, the true impact of the project may have been greater than estimated. Socioeconomic development was equivalent in both areas. Health services increased considerably. There was negligible in or out migration among citizens above the age of 30.

Because the objective was to serve the entire province of North Karelia, different components of intervention were not differentially applied within North Karelia. Thus, we cannot state secure conclusions about the unique or relative contributions of different programmes, subprogrammes or channels of action. The observed changes may have been due to any one or all of the several actions towards each specific objective. Furthermore, the changes that took place in North Karelia were at least partly the result of more general international trends towards cardiovascular risk reduction which are difficult to disentangle from the specific effects of the North Karelia project. In spite of that, a few comments about the feasibility and coverage of different activities can be made.

Table 1. Mean risk factor levels for men and women in North Karelia and reference area in 1972 and 1977

Assessment areas	Men	1972	1977	Change
Cholesterol	North Karelia	269.3	259.0	-10.3[a]
	Reference	260.4	261.2	+0.8
Cigarettes/day (total sample)	North Karelia	9.9	8.1	-1.8[a]
	Reference	8.9	8.1	-0.8
Systolic blood pressure	North Karelia	147.3	143.9	-3.4[a]
	Reference	145.0	146.8	+1.8
Diastolic blood pressure	North Karelia	90.8	88.6	-2.2[a]
	Reference	92.4	92.8	+0.4
Risk score	North Karelia	4.1	3.4	-0.7[a]
	Reference	3.7	3.7	0.0
	Women	1972	1977	Change
Cholesterol	North Karelia	256.3	258.2	-7.1
	Reference	259.2	255.1	-4.1
Cigarettes/day (total sample)	North Karelia	1.3	1.1	-0.2
	Reference	1.4	1.3	-0.1
Systolic blood pressure	North Karelia	149.4	143.5	-5.9[a]
	Reference	144.1	145.4	+1.3
Diastolic blood pressure	North Karelia	90.7	86.8	-3.9[a]
	Reference	90.0	89.5	-0.5
Risk score	North Karelia	3.3	2.9	-0.4[a]
	Reference	3.0	2.9	-0.1

[a] Significant difference ($p < .01$) between change in North Karelia and reference area (one-tailed t test).

The new preventive services developed gradually and required a fair amount of organizational effort and training of local personnel. Training was extensive but at times the number of participants was restricted because of conflicts with work duties or other meetings. Environmental changes were certainly effective, but their extent was limited by national legislation, other national rules, or economic realities. The extent and coverage of general anti-smoking advice certainly matched with initial expectations. Health personnel were attentive to patients' smoking, but the success of more intensive group support in smoking cessation was not great. The nutrition programme resembled these experiences. General nutrition information and counselling was extensive and had wide coverage. Less developed was the system to provide intense individual nutrition counselling for the overweight or those with very high cholesterol levels. On the other hand it was felt that mass intervention to change nutrition habits was probably a better strategy in the situation where practically everybody had an elevated cholesterol level relative to world norms. The hypertension subprogramme succeeded with what proved to be clear and practical programmes to screen, treat and follow the approximately 10-15% of the adult population with hypertension. The reorganization of preventive services and organization of community support and action were probably the most effective aspects of the overall project.

Although the final epidemiological results concerning mortality-reducing effects of the programme in North Karelia are still to be shown, the goals of health promotion were met to the satisfaction of those who initially requested the action. The general perception of "success" had led to rapid national adoption of innovations that originated in North Karelia. For example, a major smoking cessation television programme was based upon the project experiences and methods (36), and a more comprehensive risk factor reduction programme on national television has now been conducted. As mentioned previously, several of the new dairy products and health service models that were developed in North Karelia are now available throughout Finland. The North Karelia project has become popular as a practical and positive example that health promotion and control of modern chronic disease epidemics is feasible.

North Karelia is a fairly large administrative area, and Finland is a relatively small country where public health resources are as scarce as they are elsewhere. The expenditures for an extensive investigation have been limited to a single geographic unit, with only one other unit provided as a matched reference. We feel that the North Karelia project must be viewed as a promising case study rather than a critical test of the effects of health promotion. That test will depend upon further studies. Only by using the different resources available for intervention and measurement in different countries can enough experience be gained to draw final conclusions on the value of health promotion in modern public health work.

Implications

It is difficult to estimate the potential impact of similar activities in the United States. Stunkard and his colleagues in Pennsylvania are attempting an approximate replication of the North Karelia project in a rural setting and several other research teams have begun parallel investigations of community health promotion for cardiovascular disease prevention.[a]

---

[a] Personal communications from J. Farquhan, Stanford University; A. Stunkard, University of Pennsylvania, July 1980; H. Blackburn, University of Minnesota, February 1981; and R. Carlton, Pawtucket Memorial Hospital, (Pawtucket, RI), June 1980.

The Stanford-Three-Community-Study (37) demonstrated significant risk reductions in a cohort study in rural California. However there are critical differences between the Finnish and North American cultures that probably make health promotion easier to implement in Finland. United States citizens do not uniformly perceive governmental agencies as credible sources of information, whereas Finns are generally more willing to accept public recommendations and to cooperate with community health workers. Thus, public health interests in Finland find it easier to regulate promotion and marketing of products such as tobacco cigarettes. The governmental regulation of medicine in Finland undoubtedly increases the extent to which preventive services can be shaped to serve the interests of public health. Cultural acceptance of the notion that health is a public responsibility in Finland facilitates perception of the wisdom of shifting investments towards the prevention of disease. Thus the North Karelia project serves not only to demonstrate objectives of health promotion but also to illustrate a cultural setting favourable for the development of innovations in public health and preventive medicine.

REFERENCES

1. Hamburg, D. Disease prevention: the challenge of the future. American journal of public health, 69: 1026-1034 (1979).
2. Surgeon General's report on health promotion - background papers. Washington, DC, Government Printing Office, 1979.
3. Somers, A.D. ed. Promoting health. Germantown, MD, Aspen Systems, 1976.
4. Stunkard, A.J. Behavioural medicine and beyond: the example of obesity. In: Pomerleau, O. & Brady, J., ed. Behavioural medicine. Baltimore, MD, Williams & Wilkins, 1979.
5. Lewin, K. Field theory in social science. New York, Harper, 1951.
6. Puska, P. North Karelia Project: A programme for community control of cardiovascular diseases. Finland, Publications of the University of Kuopio, 1974 (Community Health - Series A:1).
7. Puska, P. et al. The North Karelia Project: Evaluation of a comprehensive community programme for control of cardiovascular diseases in 1972-1977 in North Karelia, Finland. Copenhagen, WHO Regional Office for Europe, 1981 (Monograph).
8. Kirscht, J.P. The health belief model and illness behaviour. Health education monographs, 2: 387-408 (1974).
9. Rosenstock, I.M. Historical origins of the health belief model. Health education monographs, 2: 328-335 (1974).
10. Jessor, R. & Jessor, S. Problem behaviour and psychosocial development. New York, Academic Press, 1977.
11. Green, L.W. et al. Health education planning. Palo Alto, CA, Mayfield, 1980.
12. Kannel, W. Importance of hypertension as a major risk factor in cardiovascular disease. In: Genest, et al., ed. Hypertension. New York, McGraw-Hill Book Company, 1977.
13. Langfeld, S. Hypertension: deficient care of the medically served. Annals of internal medicine, 78:19 (1973).
14. Stamler, R. et al. Adherence and blood pressure response to hypertension treatment. Lancet, 11: 1227 (1975).
15. Tuomilehto, J. Feasibility of the community programme for control of hypertension. A part of the North Karelia Project. Finland, Publications of the University of Kuopio, 1975 (Community Health - Series A:2).

16. Nissimen, A. An evaluation of the community-based hypertension programme of the North Karelia Project with special reference to the awareness and treatment of elevated blood pressures and the blood pressure level. Finland, Publications of the University of Kuopio, 1979 (Community Health - Series original reports: 2).
17. Flay, B.R. et al. Mass media in health promotion. Health education quarterly, 7: 127-143 (1980).
18. Katz, E. & Lazarsfeld, P.F. Personal influence. Glencoe, IL, Free Press, 1955.
19. Griffiths, W. & Knutson, A. The role of mass media in public health. American journal of public health, 50: 515-523 (1960).
20. McAlister, A. et al. Applying behavioural sciences to cardiovascular health. Health education monographs, 4: 45-74 (1976).
21. Mendelson, H. Which shall it be: mass education or mass persuasion for health? American journal of public health, 58: 131-137 (1968).
22. Wikler, D.I. Ethical issues in governmental efforts to promote health. Washington, DC, Institute of Medicine, National Academy of Sciences, 1978.
23. Crawford, R. You are dangerous to your health: the ideology of victim blaming. International journal of health services, 7: 663-680 (1977).
24. McGuire, W.J. The nature of attitudes and attitude change. In: Lindsay, G. & Aronson, E., ed. Handbook of social psychology. Reading, MA, Addison-Wesley, 1969 (Vol. III).
25. Bandura, A. Principles of behaviour modification. New York, Holt-Rinehart, Winston, 1969.
26. Neittaanmäki, L. et al. The role of lay workers in community health education in the North Karelia project. Scandianavian journal of social medicine 1981, 8: 1-7 (1980).
27. Salonen, J.T. Smoking and dietary fats in relation to estimated risk of myocardial infarction before and during a preventive community programme. Finland, Publications of the University of Kuopio, 1980 (Community Health - Series original reports: 1).
28. Bernstein, D. & McAlister, A. The modification of smoking behaviour: progress and problems. Addictive behaviour, 1: 89-102 (1976).
29. Meyer, A.J. et al. The role of opinion leadership in a cardiovascular health education campaign. In: Ruben. B.D. ed. Communication Yearbook 1. New Brunswick, Transaction Books, 1977.
30. McKnight, J.L. Organizing for community health in Chicago. Science for the people, 10: 27-34 (1978).
31. Olson, M. Jr. The logic of collective action. Cambridge, MA, Harvard University Press, 1965.
32. Guskin, A.E. & Ross, R. Advocacy and democracy: the long view. American journal of orthopsychiatry, 41: 43-57 (1971).
33. Periman, J.E. Grass-rooting the system. Social policy, 7: 4-20 (1976).
34. Glasunov, I. et al. Methodological aspects of the design and conduct of preventive trials in ischaemic heart disease. International journal of epidemiology, 2: 137-143 (1973).
35. Salonen, J.T. et al. Changes in morbidity and mortality during a comprehensive community programme to control cardiovascular diseases during 1972-1977 in North Karelia. British medical journal, 2: 1178-1183 (1979).
36. Puska, P. et al. A comprehensive television smoking cessation programme in Finland. International journal of health education (supplement), 22: 1-26 (1979).
37. Farquhar, J. et al. Community education for cardiovascular health. Lancet, 1: 1192-1195 (1977).

HEALTH EDUCATION IN THE GENERAL PRACTICE CONSULTATION: DOCTORS' ADVICE ON DIET, ALCOHOL AND SMOKING[a]

by
Mary G. Boulton & Anthony Williams

It is increasingly being argued that an important locus for health education is the ordinary general practice consultation (1-5). About three quarters of the population visit their doctor at least once a year and almost everyone at least once every five years (6). General practitioners are therefore in a position to reach virtually the entire population of registered patients, including those least likely to take up health education services on their own initiative. The continuity of care provided by general practice also means that the doctor has the advantage of being able to build upon, monitor and reinforce his health education efforts. This is a particular advantage since health knowledge may be best developed and refined over an extended period of time. Russell et al's (7) study of antismoking advice also suggests that the ability to follow up the patient's behaviour once advice has been given increases the effectiveness of that advice.

Patients, in turn, regard doctors as the most respected and trusted source of health information (8). They see them as possessing expert scientific knowledge of the causes and treatments of disease and as being able to adapt that knowledge to the individual circumstances of their patients. Health advice offered by a general practitioner may thus have a greater impact than that provided by other sources. Patients are particularly receptive to such information in the context of the illness interview. As Cartwright and Anderson (9) report, 85% of the respondents they interviewed wanted to know as much as possible about what was wrong with them when they were ill and about half wanted to know the actual mechanical details as well.

Finally, evidence for the particular value of the consultation as a setting for health education comes from evaluations of mass media campaigns. These suggest that, while the media have an important agenda setting role, on their own they have a rather limited impact on attitudes and behaviour. As Alcalay (10) points out, "active participation of the receiver in an interactive process is much more effective in achieving and maintaining educational objectives ... than is a passive role". Consultations are by definition interactive and provide the opportunity for educational dialogue and an exchange of ideas between doctor and patient (11).

In the light of such arguments, the *principle* of health education in the consultation has received strong support from the Royal College of General Practitioners (2, 12). Rather less attention has been paid, however, to the

---

[a] This article was published in Health Education Journal, 42(2): 57-63 (1983).

practice of health education by general practitioners in actual consultations. Audits of consultation activity have depended mainly on retrospective searches of patient records or on questionnaire surveys of attitudes and behaviour. A recent survey of Oxfordshire doctors (13), for example, found that 74% of the general practitioners questioned considered that they should have a major involvement in efforts to curb smoking and a similar proportion reported that they usually initiated discussions of smoking with basically healthy adults who smoked. Such self reports, however, may indicate no more than a positive attitude among general practitioners to one crucial health education issue and cannot be taken seriously as reflecting actual behaviour.

Evidence from patient records reviewed in another study supports the view that smoking histories may be discussed much less frequently than doctors themselves realize: a search of the notes of almost 2000 middle-aged men and women revealed records of smoking histories for less than a quarter of them (14). Because these studies have relied solely on indirect methods of assessing behaviour, a great deal of confusion and uncertainty still surrounds our knowledge of the health education occurring in ordinary consultations. For a clearer picture of current practice, more precise information on the opportunities for health education and the extent to which they are taken up in actual consultations is called for. To supplement that available on advice about smoking, information on advice about other health education issues such as diet and alcohol is also necessary.

Methods

The data presented in this paper were collected as part of a larger study of the educational potential and outcomes of general practice consultations. A sample of the surgeries carried out by 16 doctors in 8 areas of south-east England were tape-recorded with the permission of doctor and patient. Two of the practices were in rural areas, eight in suburban areas and six in Inner London areas. Thirteen of the doctors were men and three women; all were principals in their practices and about half were trainers. All but one worked in a group practice.

Of the 1470 consultations recorded, a sample of 405 (about 25 per doctor) were selected for intensive study. The selection criteria, which were designed largely to eliminate consultations in which no new educational issues were raised, are outlined in an earlier publication (11). Since the way in which it was selected may have biased the main sample, a second *random* sample of 75 cases (5% of the total) was drawn as representative of all the consultations available. The consultations in the main sample were transcribed in full and those in the random sample transcribed in part. Both transcripts and audiorecordings were used in the analysis.

Each of the consultations in the two samples was assessed first in terms of the opportunities for health education it provided and then in terms of the discussion that occurred and the advice that was given. Two sorts of opportunity were distinguished: (i) opportunities for *problem-related health education*, where the nature of the patient's problem itself raised a health education topic; and (ii) opportunities for *non-problem-related health education*, where the doctor could take the initiative and raise such topics with the patient, independently of the main presenting problems.

These distinctions rest on a number of arguments. Health education which is related to the patient's current problem is often regarded as a more effective form of intervention since the patient's concern for his condition generates greater motivation to attend to and carry out the doctor's advice. For example attempts to persuade smokers to quit are thought to be more effective at critical junctures such as when a smoker is pregnant (15) or is presenting with symptoms of chest disease and heart disease (16). Higher rates of compliance with such advice is also reported in studies which relied on patients with smoking-related diseases (17). With this evidence in mind, *problem-related opportunities* were defined for each of the three topics. Opportunities for diet were considered to have been created when patients presented problems associated with the digestive tract, joints, weight, migraine and cardiovascular disease. In relation to alcohol, problem-related opportunities were considered to exist when the consultation dealt with recurrent gastric conditions, weight problems, renal and urinary tract problems and recurrent headaches. For smoking, problem-related opportunities were considered to arise when the patient presented respiratory or upper digestive tract problems, persistent headaches and cardiovascular disease.[a]

Non-problem-related health education, while more peripheral to the patient's own concerns, has the alternative value of conveying information to a larger number of people. Evidence from Russell et al's study on smoking (7) indicates that this sort of routine health education in the consultation can have a more significant impact on the smoking habits of the population than more selective interventions such as smoking clinics. Such routine health education may appear time-consuming and cumbersome, but efforts to carry out similar screening measures have proved both manageable and effective. Evaluating his own attempt to implement a combined package of five preventive activities, Page (18) concluded that "it is possible to carry out reasonable levels of preventive activity in the ordinary consultation in general practice. If such a package was used more widely a large proportion of the population could be screened in a short time." By implication, similar health education packages might ensure that all patients in a practice were adequately informed about diet, alcohol and smoking. All consultations in which *problem-related opportunities* did not arise were therefore considered to provide *opportunities for non-problem-related health education.*

In assessing the consultations, a health education issue was considered to have been *raised* when any discussion of the relevant topic occurred. A distinction was then made between those consultations in which the doctor simply acknowledged the patient's initiation of the discussion on the topic or asked a few questions himself to clarify the matter, and those in which he also gave clear *advice* to the patient. Other important issues, such as the content of advice on diagnostic, treatment and preventive issues, the way in which the advice was given and the extent to which it was grounded in the patient's own views were dealt with more thoroughly in the main study (11) but are beyond the scope of the present paper.

---

[a] It should be stressed that these definitions were not meant to be exhaustive or to reflect in an exact sense the intricacies of clinical diagnosis in such consultations; rather they circumscribe the kinds of symptoms and disease that are often related to diet, alcohol and smoking and the kind of initiative both doctors and patients took in raising such topics.

Results

Characteristics of the consultations

The consultations in the intensive sample involved 136 men, 202 women and 67 young children accompanied by their mothers. Just under half (42%) were consultations for a new problem or a new episode. Only a third (36%) lasted six minutes or less; a similar proportion (37%) lasted between six and nine minutes and a quarter (27%) more than nine minutes. The 5% random sample differed from the intensive sample mainly in that it contained a higher proportion of follow-up consultations and consultations dealing with long-term problems.

Problem-related health education

Diet (Table 1). In 7% of the consultations in the intensive sample, but in three times that proportion in the random sample, the problem presented to the doctor created the opportunity for discussion of the patient's diet. About half (thirteen) of the consultations in the intensive sample and about two thirds (nine) of those in the random sample were concerned with symptoms associated with the upper and lower digestive tract such as recurrent indigestion, abdominal pain suggestive of ulceration, diarrhoea and constipation. In four consultations in the intensive sample and two in the random sample, being overweight was seen as a problem in its own right. In an additional four consultations in the intensive sample and one in the random sample, the main symptom was pain in the hip, knee or spine due to arthritis. The remainder of the consultations identified as opportunities involved patients with symptoms of cardiovascular disease or hypertension (five in the intensive sample and three in the random sample) or ones in which the patient was experiencing migraine-type headaches (three and one respectively).

Table 1. Problem-related health education on diet

	Intensive sample	Random sample
Opportunities available	29/405	16/75
(proportion of consultations)	7%	21%
Issue raised	18/29	3/16
(proportion of opportunities)	62%	19%
Advice given	13/29	2/16
(proportion of opportunities)	45%	13%

Although the random sample provided a higher proportion of opportunities for discussing diet, the proportion of those opportunities taken up was much smaller than in the intensive sample: in only about one fifth of the opportunities in the random sample was the issue of diet raised, compared with about two thirds of the opportunities in the intensive sample. Since the random sample contained a higher proportion of follow-up consultations it appears that doctors are less likely to discuss diet with their patients once a diagnosis has been made and the acute stages dealt with.

The highest response to the opportunities presented occurred in relation to patients for whom the main concern was their weight. In all four consultations in the intensive sample where the issue was relevant and in one in the random sample, the discussion led to positive advice from the doctor about the need to lose weight and how to go about it, normally in the form of what to eat and what to avoid. In two cases this was supplemented by a printed diet plan. It is interesting that on all occasions the topic was initiated by the patients, all women. Problems of the digestive tract were the second most frequently exploited category of opportunity (six in the intensive sample and two in the random sample). Within this category, the doctor showed a marked bias to those patients diagnosed as having peptic or duodenal ulcer or hiatus hernia. Where the diagnosis was less clear cut or was apparently non-serious the doctor was less likely to give advice.

The two least exploited categories of opportunity were those relating to arthritic and cardiovascular conditions: only one patient, in whom rheumatoid arthritis was seen as the underlying complaint, was advised about dieting. The neglect of the topic in the remainder of the consultations might be explained partly by the fact that those patients were not visibly overweight, though the doctor could have advised about the need to avoid putting on any more weight in the future. The fact that dietary factors implicated in the etiology of cardiovascular disease were not discussed at all could also be seen as a major lost opportunity for health education.

Where diet was discussed, it was generally in vague and open-ended terms. In five consultations, the doctor asked the patient about aspects of his diet and concluded it was not implicated in the problem, though this was not explicitly communicated to the patient. In eight other instances, the patient brought up the subject but the doctor appeared to see it as insignificant and responded either by changing the subject or by giving minimal advice such as "eat more salads and less chips". In four consultations the discussion and the doctor's advice was exclusively on weight and the patient was left to infer how to deal with the problem.[a] The difficulties that can arise in these circumstances are well illustrated by the following exchange between a doctor and a female patient, aged 40, diagnosed as having early arthritis:

Doctor	... the most important thing is to keep down your weight, because if you put more weight on obviously it's more strain on the joint. Anything else you want to ask me?
Patient	Well, just, you know, precautions and anything else that would help the situation.
Doctor	The weight's the most important.
Patient	I'll tell you something, I've never eaten a lot of fruit ...

The eight consultations where relatively comprehensive advice was given included four instances where an ulcer was diagnosed, a case of chronic constipation, a case of arthritis, and two instances of being overweight. In one of these the topic was forcefully initiated by the patient at the beginning of the consultation: "I've come to see you about a diet because I've put on weight." In the other, the patient's depressive condition was the main problem and weight gain was seen by the doctor as a consequence of this:

---

[a] Because diet was not explicitly discussed in these consultations, they were grouped with those in which the issue was not raised.

> Doctor This is clearly making you unhappy and you're getting fat and overeating. Cut out fatty stuff and starchy things. Eat three meals a day and don't pick at things in between.

In only two consultations was the advice set in the context of long-term chronic problems; in the remainder the emphasis was on dealing with acute symptoms and in consequence the important distinctions between alleviation and prevention tended to become blurred.

Alcohol (Table 2). The patient's presenting problems were assessed as providing an opportunity to discuss the topic of alcohol in about one tenth of consultations in both the intensive and random samples. The slightly higher proportion of opportunities for alcohol discussion than for diet found in the intensive sample may be due partly to the overlap between the two topics in relation to weight and ulcer problems. Weight problems accounted for eight of the opportunities in the intensive sample and for one in the random sample. Problems of the upper digestive tract such as stomach discomfort, periodic vomiting and heartburn accounted for fifteen of the inclusions in the intensive sample and four in the random sample. Other cases in which alcohol was deemed potentially relevant were mainly those involving lower digestive tract problems such as chronic constipation, recurrent diarrhoea and bowel inflammation (three and two respectively), headaches, dizziness and fits (six and one respectively) and renal and urinary tract problems (two in the intensive sample).

Table 2. Problem-related health education on alcohol

	Intensive sample	Random sample
Opportunities available	36/405	8/75
(proportion of consultations)	9%	11%
Issue raised	11/36	0/8
(proportion of opportunities)	31%	-
Advice given	7/36	-
(proportion of opportunities)	19%	-

In almost a third of the relevant consultations in the intensive sample but in none of those in the random sample did the doctor use the opportunity created by the problems to raise the topic of the patient's drinking habits. This suggests that there is less likelihood of such discussion occurring in follow-up consultation even though there is evidence of higher consultation rates among patients with alcohol-related problems (19). In all the instances where alcohol was discussed, the patient was male. There was a marked bias to problems associated with ulcer conditions (five) and disorders such as migraine, dizziness or fits (four). The relationship between alcohol consumption and weight problems, however, was raised on only one occasion.

The patient raised the issue as often as the doctor did, and clear advice on alcohol was more often given when the discussion was patient-initiated. Such advice was rarely couched in terms of what might be suitable levels of consumption, and the actual amounts of alcohol that the patients consumed were not routinely elicited. In four consultations, the doctor raised the issue of alcohol intake, but having established that consumption was not significant, made no further comment and left the patient to infer the significance of the discussion. In the following example, the patient complained of weight and back trouble:

Doctor Do you drink much beer?

Patient No. Hardly at all.

Doctor Or other alcohol?

Patient The occasional martini, but I wouldn't say more than two a week.

Doctor What do you have for breakfast ...

The exceptions were the two consultations with patients who had a history of drink problems where alcohol intake and its effects were always likely to be on the agenda. More typical of the kind of response doctors made to the issue is the following example of a discussion with a patient experiencing persistent acid reflux:

Patient What about a glass of whisky?

Doctor Yes. Ideally it would be better for you to go without it.

Patient A glass of Guinness?

Doctor Yes. I think that would not be quite so irritating.

This example also illustrates the diffidence with which advice on alcohol intake was given.

Smoking (Table 3). About a quarter of the consultations in both samples created problem-related opportunities for discussing smoking. Sixty-one of the consultations in the intensive sample and eleven in the random sample were about problems associated with the respiratory system (e.g. throat and chest infections, chronic bronchitis) and a further twenty-five in the intensive sample and ten in the random sample were associated with cardiovascular disorders (e.g. hypertension, coronary heart disease, arteriosclerosis). The remainder were evenly divided between those relating to ulcer conditions (e.g. peptic or duodenal ulcer, hiatus hernia) and those about persistent, severe headaches.

In less than a fifth of the appropriate consultations in the intensive sample and in only a tenth of those in the random sample did the doctor exploit the opportunities available to discuss the patient's smoking habits. In the majority of instances in the intensive sample (sixteen) and in both those in the random sample the discussion was initiated by the doctor. Patients, it seems, were reluctant to bring the subject up directly, notwithstanding the fact that fifteen in the intensive sample and both in the random sample were smokers.[a] The distribution of opportunities exploited in the intensive sample was comparable to the distribution of those available: most were concerned with the respiratory system (eleven) and the cardiovascular system (four). In the random sample, both the discussions were in relation to ulcer conditions.

Table 3. Problem-related health education on smoking

	Intensive sample	Random sample
Opportunities available	105/405	20/75
(proportion of consultations)	26%	27%
Issue raised	18/105	2/20
(proportion of opportunities)	17%	10%
Advice given	11/105	2/20
(proportion of opportunities)	10%	10%

While smoking was discussed in a total of twenty consultations, clear advice to give up smoking was given in only thirteen. In six of the remaining consultations the number of cigarettes smoked each day was established but no judgement was offered on the information obtained, as the following excerpt from a consultation with a man complaining of phlegm on the chest shows:

Doctor Are you smoking much?

Patient Not as much as I was smoking. I've gone down to about 20 every two days.

Doctor: Mmmm ... Now for something for your back.

Even when the doctor did advise the patient to stop smoking, he rarely explained or justified his view in terms of the effects of the smoking on the patient's health. Most comments were simple admonitions of the following sort:

Doctor The only thing that's going to help that [leg pains from arteriosclerosis] is stopping smoking.

In only one consultation did the doctor justify his view on smoking by explaining its potential effects on the patient:

Doctor We know that smoking and bronchitis go together and that bouts of acute bronchitis ultimately lead to chronic bronchitis with a shortage of breath when you try to do things, which isn't much fun.

---

[a] Data on the smoking habits of patients in the intensive sample was obtained in post-consultation interviews. Of those interviewed (320), about half (151) were current smokers and within this group 42 patients presented with potentially smoking-related ailments.

Similarly, virtually no attempt was made to explore the patients' rationales for needing to smoke, even though these views were hinted at by the patients.

Non-problem-related health education

Consultations in which a discussion of the patient's diet, alcohol consumption or smoking habits are not directly called for by his presenting problems none the less provide an opportunity for more routine or opportunistic health education efforts. Using this somewhat residual definition, the vast majority of the consultations in both samples provided the opportunity for such efforts in regard to diet, alcohol and smoking. As Table 4 shows, however, these opportunities were virtually never used: in no consultation was the patient questioned about his diet or alcohol intake and smoking was discussed with only five patients. This represents only 2% of the consultations in the intensive sample in which smoking habits could have been raised by the doctor.

Table 4. Non-problem-related health education on diet, alcohol and smoking

	Diet		Alcohol		Smoking	
	Intensive sample	Random sample	Intensive sample	Random sample	Intensive sample	Random sample
Opportunities available	376/405	60/75	369/405	67/75	300/405	57/75
(proportion of consultations)	93%	80%	91%	89%	74%	76%
Issue raised	0/376	0/60	0/369	0/67	5/300	0/57
(proportion of opportunities)	-	-	-	-	2%	-
Advice given	-	-	-	-	5/300	-
(proportion of opportunities)	-	-	-	-	2%	-

Of the five patients with whom smoking was discussed, three were new patients registering with one doctor, whose routine on first meeting her patients included recording their smoking history. The two new patients who currently smoked were strongly advised to give up the habit:

> Doctor Anything over five cigarettes a day is known to deposit enough carbon monoxide in your blood stream to make it sticky. You don't have to be a plumber to know what happens when your blood is sticky. The nicotine narrows your blood vessels so the pipe through which the blood flows gets narrower. Tar can get deposited on lungs and give you cancer. It is a good insurance for bad health. It doesn't show in the beginning but it does in the end. So the more you smoke the more you may want to smoke because it's drug addiction ... Now if you can cut down on smoking I would be most grateful.

When the third patient said she did not smoke, the doctor was very supportive, saying "Oh good. Half of our problems are the smokers."

In the remaining two consultations in which smoking was discussed, the patients raised the topic themselves. One did so to obtain support for his recent decision to stop smoking. The doctor endorsed his resolve, agreeing "That's a good thing of course." In the other consultation, the patient's mother used the occasion to invoke the doctor's support for pressuring her teenaged daughter to stop.

Discussion

Our aim in this study was to define the opportunities for education about diet, alcohol and smoking available in a sample of general practice consultations and to assess the extent to which they were taken up by the general practitioners. Four sets of findings call for immediate comment.

The first concerns the relatively large proportion of consultations which provided opportunities for problem-related education, particularly in relation to smoking. In a quarter of all consultations the doctor could have raised the issue of the patient's smoking habits and related it directly to the patient's current illness experience. In one fifth of the random sample consultations he could have done so for the patient's diet. Particularly for doctors who may feel diffident about inquiring into their patients' personal habits for no apparent reason, these opportunities are uniquely valuable. If these opportunities alone were used, general practitioners could have significant impact on the health knowledge and behaviour of their patients.

The second main set of findings concerns the small proportion of these opportunities which general practitioners actually used. Opportunities for problem-related health education were much more likely to be taken up than were opportunities for more routine health education but the proportion of those available that were eventually used was still very small. Only a fifth of all the opportunities in the intensive sample and a tenth of those in the random sample were used to give advice. If the argument that current illness experience increases a patient's receptivity to health information is accepted, this represents a considerable neglect of valuable opportunities.

The third set of findings was that the opportunities for non-problem-related health education were rarely exploited. Only one doctor routinely inquired about smoking habits and this was confined to patients newly registering with the practice. There was no indication that any of the other doctors routinely raised the issues of smoking or diet and alcohol with patients. The procedure followed by the one doctor who did so provides an example of the way, at least for defined target groups such as new patients, doctors can widen the scope of their consultations to include health promotion advice. At the present time, however, theoretical interest in opportunistic health education among leading figures in general practice does not seem to be reflected in the routine practice of health education among general practitioners in general.

Finally, comparing the three health education topics examined in this study, we can discover no particularly consistent pattern in the way opportunities were exploited. In the intensive sample, diet was the topic most likely to be discussed in a problem-related context, whereas smoking was least likely to be discussed. For non-problem-related opportunities the converse appears to be true, with smoking being the only topic registering any activity in either sample. In the random sample, alcohol consumption was never discussed in a problem-related context despite a number of opportunities. One possible explanation of the variation is the behaviour of patients in relation to the three topics. Patients were much less inclined to raise the issue of smoking with their doctor than the issues of alcohol and diet. Gender bias was also evident in the way the latter two topics were raised: only male patients brought up the subject of alcohol, whilst female patients accounted for the majority of discussions about weight. Patients can therefore exert a strong and selective influence on what topics get discussed in consultations. The issues that patients leave off the agenda, either because they are not perceived as relevant to the problem or because they are potentially stigmatizing may then contribute to an element of missed opportunity.

The way doctors respond to patient initiatives and the common sense assessments they make in these circumstances may be as influential in determining which opportunities are taken up as detached clinical judgements about the patient's condition. That discussions of smoking were usually initiated by the doctors points to some success for the considerable publicity given to the risks of smoking and to the role of general practitioners in encouraging patients to give up smoking. As Jamrozik and Fowler (13) found, general practitioners now generally accept that they have a significant part to play in helping their patients to curb their smoking habits. None the less, only a small fraction of the opportunities available for doing so were in fact used and on no occasion was advice supplemented by printed material. This underlines the gap between positive attitudes and actual behaviour. In relation to alcohol, however, the evidence of this study is more indeterminate, with major differences appearing between the random and intensive samples. Previous studies have also suggested that general practitioners are particularly wary of inquiring into patterns of consumption among their patients (20) and that a large proportion of alcohol problems go undetected in general practice (2).

Diet, on the other hand, was discussed relatively often, but largely in the limited context of dealing with the acute symptoms of ulcers, weight problems and constipation and rarely in terms of its contribution to positive health. This is a central theme in all of the health education efforts made by the doctors. As the virtual absence of non-problem-related information indicates, advice on health behaviours was viewed almost entirely as a means of dealing with current problems. The doctors seemed to have little notion of health promotion or the role of health education for currently healthy individuals.

The way in which the doctors in this study overlooked the opportunities for discussing diet, alcohol and smoking cannot be seen in neutral terms as just lost opportunities for educating patients. Patients may interpret and attach as much significance to comments which are not made when the context indicates their obvious relevance, as they do to comments which are made. This is especially relevant to consultations in which an issue is raised, but in which no advice follows. Even when advice is given, it may be perceived by some as too indefinite to be taken as a warning against a particular habit: for example, being told it would be better not to smoke rather than definitely to quit (21). Furthermore, doctors cannot assume that patients view the role of these behaviours in relation to health in the same way as they do. Perceptions of causation and the particular linkages between specific behaviours and diseases may be conceptualized quite differently from those that inform a clinical view (22). Similarly, lay views of an individual's ability to influence his health status may be at odds with those of health care professionals (23). The extent to which these different perspectives remain implicit in consultations will clearly influence patients' initiatives in raising topics and doctors' responses in the form of information seeking and advice.

In the light of current support for the role of health education in the consultation, the reasons why general practitioners are not more active in practising it are not clear. Time is certainly a major constraint, but other factors may be important in maintaining health education as a low priority for doctors. Limited awareness of the opportunities available and lack of skills to take advantage of them also contribute to the low level of activity observed in this study. Doctors who define their role primarily in terms of being responsive to patients' demands or needs may view such activity as intrusive and moralizing. Others regard such intervention as ineffective since it shows no automatic relationship to compliance.

It is in the context of these sorts of pressures and preconceptions that attempts to encourage health education in the general practice consultation must operate. The Royal College of General Practitioners has recently argued that anticipatory care, in which health education plays an important role, is the direction in which general practice needs to develop (2). The Health Education Council in turn sees general practice as an important area in which to develop activities (5). Statements from these and other institutions are indicative of a greater policy orientation in the direction of health education in general practice. Efforts to implement these policies which do not address the kinds of educational problems and constraints which general practitioners encounter in their day to day contact with patients, however, are likely to have limited success in the long term. In order to bridge the gap between acceptance of the need for health education in the consultation and the practice of effective health education in reality, something more than support and encouragement is needed.

Acknowledgement

The work described in this paper was undertaken while the authors were members of the Health Education Studies Unit. The Unit was entirely funded by the Health Education Council. We wish to acknowledge the help of the general practitioners and patients involved, without whom the study would not have been possible. We should also like to acknowledge the help of our colleagues at the Health Education Studies Unit, in particular David Tuckett, Coral Olson and Cathy Stopes-Rowe.

REFERENCES

1. Stott, N.C. & Davis, R.H. The exceptional potential in each primary care consultation. Journal of the Royal College of General Practitioners, 29: 201-205, (1979).
2. Health and prevention in primary care, report from general practice 18. London, Royal College of General Practitioners, 1981.
3. Tudor Hart, J. A new kind of doctor. Journal of the Royal Society of Medicine, 74: 871-883 (1981).
4. Smail, S. Opportunities for prevention: the consultation. British medical journal, 284: 1092-1093 (1982).

5. Taylor, K. Preventive medicine in general practice. British medical journal, 284: 921-922 (1982).
6. Cartwright, A. & Anderson, R. Patients and their doctors, 1977, Occasional paper No. 8. London, Royal College of General Practitioners, 1979.
7. Russell, M.A. et al. Effect of general practitioners' advice against smoking. British medical journal, 281: 231-235 (1979).
8. Budd, J.L. & McCron, R. Communication and health education: a preliminary study. Report prepared for the Health Education Council, Centre for Mass Communication Research, 1979.
9. Cartwright, A. & Anderson, R. General practice revisited: a second study of patients and their doctors. London, Tavistock, 1981.
10. Alcalay, R. The impact of mass comunications campaigns in the health field. Social science and medicine, 17: 87-94 (1983).
11. Health Education Studies Unit. Final report on the patient project. London, Health Education Council, 1982.
12. Journal of the Royal College of General Practitioners. Health education. March, 142-143 (1982).
13. Jamrozik, K. & Fowler, G. Anti-smoking education in Oxfordshire general practices. Journal of the Royal College of General Practitioners, 32: 179-183 (1982).
14. Fleming, D.M. & Lawrence, M.S. An evaluation of recorded information about preventive measures in 38 practices. Journal of the Royal College of General Practitioners, 31: 615-620 (1981).
15. Baric, L. et al. A study of health education aspects of smoking in pregnancy. International journal of health education, 19(1): 1-17 (1976).
16. Burns, B.H. Chronic chest disease, personality and success in stopping cigarette smoking. British journal of social and preventive medicine, 23: 23-27 (1969).
17. British Thoracic Society, Comparison of four methods of smoking withdrawal in patients with smoking related diseases. British medical journal, 286: 595-597 (1983).
18. Page, C. Five preventive activities carried out during general practice consultations. British medical journal, 286: 1787-1788 (1983).
19. Buchan, I.C. et al. Problem drinkers and their problems. Journal of the Royal College of General Practitioners, 31: 151-153 (1981).
20. Rathod, N.H. An enquiry into general practitioners' opinions about alcoholism. British journal of addiction, 62: 103-111 (1967).
21. Cooperstock, R. & Thom, ?. Health, smoking and doctors' advice. Journal of the Royal College of General Practitioners, 32: 174-178 (1982).
22. Blaxter, M. The causes of disease: women talking. Social science and medicine, 17(2): 59-69 (1983).
23. Pill, R. & Stott, N. Concepts of illness, causation and responsibility: some preliminary data from a sample of working class mothers. Social science and medicine, 16: 43-52 (1982).

AN APPROACH TO HEALTH PROMOTION IN ONE REGION[a]

by

John Ashton & Howard Seymour

Introduction

In 1981, the Thirty-fourth World Health Assembly formally adopted the global strategy of health for all by the year 2000 (HFA2000) (1,2). According to this strategy, the task is to ensure that in 15 years' time "all people in all countries should have at least such a level of health that they are capable of working productively and of participating actively in the social life of the community in which they live".

The three principal objectives of the strategy are the promotion of healthy lifestyles, the prevention of preventable conditions and rehabilitation; the strategy aims to reduce or eliminate inequalities in health status. As a result of the development of the strategy of health for all, each region of WHO has developed its own programme of action aimed at the attainment of that goal. The European programme is intended to achieve a shift towards primary health care from primary medical care by way of an expansion in five areas (3,4):

- self-care;
- integration of health care with other related activities such as social welfare and education;
- the integration of primary, secondary and tertiary care;
- the meeting of the needs of underserved groups;
- community participation.

Within the United Kingdom although there has now been nearly 10 years of discussion about the way forward for preventive medicine, there is still a strong tendency to assume that the WHO strategy is for third world countries and that it has little relevance here. The current emphasis on primary medical care often seems to arise from a concern as to whether general practice services are adequate to meet increasing demands for treatment as a result of cuts in the hospital services (5,6). However some health authorities, most notably Wessex and West Midlands, have attempted to develop broad-based approaches to the promotion of good health and there is now quite general interest in the idea of multidisciplinary health promotion teams as a vehicle for making progress (7). The current paper describes the first 18 months of the development of the strategy for health promotion in the Mersey Region which has been inspired by health for all by the year 2000 and is based on the development of a regional health promotion team.

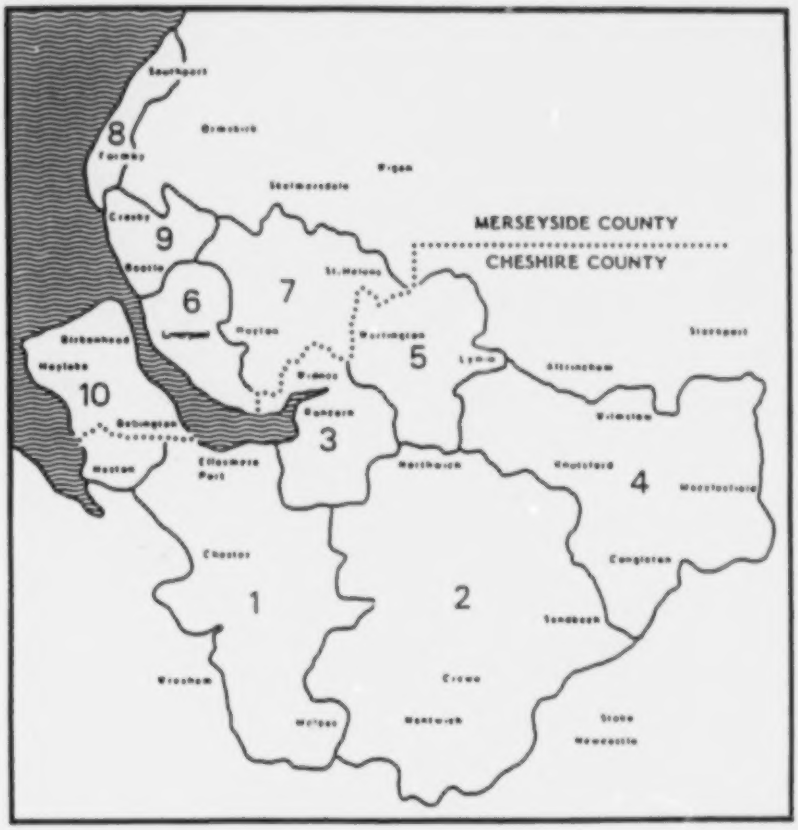
---

[a] This article was published in Community medicine, 7: 78-86 (1985).

The Mersey region

The Mersey Health Region is geographically one of the smallest and most compact in the United Kingdom. Extending from Southport in the north to Crewe in the south, east to Macclesfield and west to the Wirral, it has a population of 2.45 million. Administratively, the region is coterminous with Merseyside and Cheshire County Councils, which in turn relate to 13 local authorities and 10 health districts (Fig. 1).

Fig. 1. Mersey regional health authority and the district health authorities


Southport
8
Ormskirk
Formby
Wigan
Skelmersdale
Crosby
9
MERSEYSIDE COUNTY
CHESHIRE COUNTY
Bootle
St.Helens
6
7
Birkenhead
Liverpool
Huyton
Stockport
Warrington
Hoylake
5
Lymm
Altrincham
10
Widnes
Bebington
Runcorn
Wilmslow
3
Neston
Ellesmere Port
Northwich
Knutsford
4
Macclesfield
Chester
Congleton
1
2
Sandbach
Wrexham
Crewe
Malpas
Nantwich
Stoke
Newcastle

1 CHESTER
2 CREWE
3 HALTON
4 MACCLESFIELD
5 WARRINGTON
6 LIVERPOOL
7 ST.HELENS & KNOWSLEY
8 SOUTHPORT & FORMBY
9 SOUTH SEFTON
10 WIRRAL

With the Mersey estuary and the City of Liverpool at its centre, the region encompasses a cross-section of the nation in the variety of its geography and physical appearance, in its social structures and activities and in the health of the people it contains and supports. There are marked contrasts between industrial, urban and rural areas. Within the Mersey region as a whole, it is apparent that some districts have severe deprivation which must pervade the lives of their residents and have a major impact on health.

The role of the regional health authority

Mersey Regional Health Authority is responsible for overseeing the development of strategies for the promotion of good health and the prevention of disease within the Region. This can only be done in a systematic way if definite goals are set and a planned approach adopted as described in "Care in action" (6). In "Care in action", health authorities are directed to play their part by: insisting that the NHS develops a commitment to policies on health promotion and preventive medicine; ensuring that resources are directed to these purposes; establishing priorities for programmes which meet the health interests of the local population.

It is the recommendation of the Department of Health and Social Security that local strategies of health promotion and preventive medicine should include defined policies in relation to a number of identified priorities and that health authorities should work closely with the local authority and voluntary, professional and other organizations in order to achieve them. It is the responsibility of the regional health authority to ensure that its strategy for health promotion and preventive medicine is followed by its health districts.

Creating a climate for health promotion

Contemporary health problems are almost always multifactorial and have their roots as much in society as in biology. In general, it is possible to identify three levels at which action is necessary if a systematic approach is to be adopted: the political, the organizational, and the personal. There is a danger that the current focus on health promotion can be seen as a form of victim blaming if it concentrates solely on individual behaviour and ignores the context in which that behaviour is to be found. This is particularly the case in any attempt to influence lifestyles where in fact the key to success will lie in empowering people to take actions which will promote health partly by placing them in a position where the healthy choices become the easy choices. For this to happen, medicine needs to relinquish some of its control over information by sharing it with the public and enabling participation to become possible. In contemporary parlance the first step on this path is consciousness raising about the issues on a wide scale such as to include health and paramedical professionals, opinion-formers and decision-makers as well as the general public. Little recognition is given openly to the idea that knowledge is power as well as being information.

The appointment of Dr Ashton to a post in the Liverpool University Department of Community Health with consultant responsibility to the regional health authority provided the opportunity for a new initiative. It was apparent from the outset that there was considerable interest in, and support for, an energetic approach to health promotion both among the regional members and officers. What was also clear was that some conceptual framework was needed to develop a strategy and that some organizational arrangements would be necessary to pursue it.

In the beginning, the conceptual framework was a verbal one backed up by outline papers. It was felt that, initially a small embryonic health promotion team was necessary to identify the resources potentially at the disposal of health promotion in the region and to facilitate the creative use of the organizational arrangements at regional headquarters (7). There was concern that the team should not be a talking shop but that it should produce action. It therefore began to meet on a monthly basis with an officer-based membership which included representatives from administration, treasurers, training, public relations, nursing and statistics with the honorary specialist in community medicine (Dr Ashton), initially acting as secretary, convenor and chairperson. This group met on several occasions, essentially clarifying its objectives and seeking to establish a way forward. At the same time, it was deliberating over the appropriate extension of its membership. The initial strategy that developed contained two major elements:

- agenda setting for opinion-formers and decision-makers throughout the Region (members of health and local authorities and community health councils, politicians and health and paramedical professionals) - the top-down approach;

- consciousness raising among the general public - the bottom-up approach.

Two early achievements provided impetus to the new initiative.

Funding of the first Regional Health Promotion Officer post in the country on an experimental basis by the Health Education Council and the Mersey Regional Health Authority. This post which came to be filled by Howard Seymour was intended to improve the working arrangements between the region and the HEC and by providing support for the development of health promotion within the region to facilitate the development of health promotion within the districts. The funding included provision for secretarial support and the creation of the post of the Regional Health Promotion Officer meant that health promotion in the region had its own full-time officer. As a result the health promotion team could be adequately serviced with Howard Seymour acting as administrative secretary.

The sum of 31 000 was offered for health promotion activities in connection with the Liverpool International Garden Festival and the finish of the Tall Ships Race in Liverpool in 1984. This money was derived from regional endowment funds and was one way of obtaining "seed" money at a time of considerable financial stringency, after the financial year had already begun without a commitment to health promotion in the budget.

The regional health promotion team consolidated its membership by the inclusion of a member of the regional health authority as its chairperson and the addition of the following other members: one of the district health authority chairpersons; a representative of the district health education officers; a representative of the North West Sports Council; the Health Educational Council liaison officer for Mersey, a representative of the Mersey Community Health Councils; an occupational health physician; a general practitioner; a consultant physician. At this time, the health promotion team became a subcommittee of the regional health authority.

The Duncan factor

One local opportunity for popularizing the message about the need for a new public health was identified at an early stage. In William Henry Duncan, Liverpool had appointed in 1847, the first Medical Officer of Health in the country and it was felt that reincarnating Duncan might be a useful thing to do. Emulation being the highest form of flattery, Dr Sidney Chaves' initiative in having a Soho pub on the site of the famous Broad Street pump renamed as the "John Snow" provided the inspiration for a similar conversion of a Georgian public house in the street where Duncan was born; the "Doctor Duncan" is now a public health theme pub. At the pub's reopening under its new name, the Drama Society from a local comprehensive school performed their own melodrama based on the nature of health problems in Liverpool in the 1840s and the parallels with the sort of action which is necessary to tackle the public health problems of today.

The Duncan connection has been a useful one because it is newsworthy and there is a very widespread interest in social history. The Health Education Council has subsequently sponsored a plaque on Duncan's residence in Rodney Street (Liverpool's Harley Street) and has begun to support an annual Duncan memorial lecture which is intended as a public lecture with a wide audience to provide a platform for the new public health and thereby engender debate within the region.

1984 - consciousness raising

The role of the regional health authority is to try and develop a climate in which health promotion can flourish, particularly at the district level and at the primary health care level where most of the action does and will take place. However, there are some functions which are best carried out at a regional level, and some facilities such as the statistics section, the training unit and the press and public relations department which are essential to the prosecution of a regionwide strategy.

From a regional point of view, 1984 was identified as a year of consciousness raising. It was felt that by the end of that year health promotion should be firmly on the agenda of every district health authority in the region and that increasingly local authorities within the region should be drawn into new types of discussion and activity which had an emphasis on promoting good health. As a counterpart, it was felt that public consciousness about contemporary health problems should also be a target.

Accordingly, three main initiatives were identified for 1984 as methods to achieve consciousness raising and to place health promotion firmly on the public agenda.

A major conference

Key opinion-formers and decision-makers (550 in total) from around the region attended a one-day conference where they were informed about initiatives taking place around the country and provided with perspectives on current health problems which cross the boundaries of discipline. Participants included members and officers of health and local authorities and community health councils, professionals from various walks of life and representatives of voluntary health groups, many of whom provided stalls for an informal health fair. The conference included a key note speech from a minister of health and the contributions were extensively reported in the local mass media. The conference itself was sponsored by an insurance company.

"Health in Mersey"

A report produced especially for conference participants to provide an analysis of contemporary health in the region and a framework for action (8). Such has been the interest in this document that 4000 copies have now been produced and its distribution has been extensive. It appears to be fulfilling the intention that was held for it, which was particularly to enable an informed, focused debate to take place about what should be done to improve the health of the people in the region.

A health fair and related activities at the International Garden Festival and the Tall Ships Race

A proportion of the endowment fund monies was used to employ a full-time health events organizer to develop the "health fair". The fair began as an abstract idea and from knowledge of short-lived health fairs mounted in various parts of the country by community health councils, health education officers and others. It became a formidable operation in association with the Manpower Services Commission Community Programme and a variety of other sponsors; these included computer and bicycle manufacturers. The health fair concept was transformed into a large-scale public event.

An underlying principle which emerged at this time was to extend the idea of "health as everybodies business". Health is gained and lost for the most part outside the direct control of the health service and the participation of the public, private and voluntary sectors was sought to enable progress to occur on a broad front. From a pump-priming financial contribution of 10 000 from the Mersey Regional Health Authority, the health fair attracted in excess of 150 000 of outside funding from sources which were judged to be ethically acceptable. Much of this money went towards employing 65 long-term unemployed people as health promotion assistants. For most of these workers the scheme which developed was regarded as a useful and very enjoyable alternative to the dole.

During the 5.5 months of the International Garden Festival about 10 000 people were subjected to a 15 minute test of their physical fitness (stamina, strength, flexibility, and body composition) and received a personalized computer printout detailing their fitness test results. A total of almost a quarter of a million people passed through the health fair itself: a futuristic 1400 square foot geodesic domed structure which accommodated fitness testing equipment including 6 cycle ergometers, and 16 microcomputers programmed to assess individual lifestyle in an interactive way. The dome also contained exhibits on dental health and other topics of concern to the local community health councils as well as an imaginative display of information about lifestyle and health and an abundant provision of health education council literature.

The health fair proved to be one of the major attractions of the International Garden Festival. Much of its success appeared to be due to its comparatively simple formula. The exhibit was essentially participative; people could use the computers themselves and were offered a fitness test. The service provided was fun and most of its messages were positive and built on the interest which people already have in their health and fitness.

The health fair itself was used as a base for a range of other activities designed to capture public attention and inform. These included agitprop drama on the themes of food, tobacco and dental caries performed as a commission around the Garden Festival site by the Merseyside Young Peoples' Theatre and the theming of an area of allotment, kitchen and organic gardens with a display of the main findings of the National Advisory Committees report on Nutritional Education (NACNE) provided by one of the NACNE committee members, Caroline Walker (9). The health promotion assistants became involved in events such as the Mersey Marathon as shirt-wearers for health promotion. Liverpool goal keeper, Bruce Grobbelaar, was televised being fitness-tested the week before playing in the European Cup Final (and being assessed as excellent) and Liverpool Football Club agreed to be promoted by the Health Education Council as the nonsmoking football team; copies of the poster of Liverpool player Graeme Souness went to over 1000 head school teachers in the region with a letter from Dr David Player, the Director of the Health Education Council and Howard Seymour asking that the pupils' attention be drawn to the association between footballing success and nonsmoking.

A regional strategy for health promotion

As a result of the production of the report "Health in Mersey" and the ensuing discussion, a draft chapter on health promotion was produced for the regional plan and the essential elements of this have now been included in the new plan. In addition, it has been accepted that health promotion should form part of the regional review. The inclusion of health promotion in the regional review process has already led to a dramatic change in the number of health education officers and it has become clear that there is already a new commitment to health promotion throughout the region.

Public relations, the media and the message

From the beginning of its activities, the Mersey health promotion team has sought a high public profile and developed active collaboration with the media. This is based on a belief that for information to be perceived and understood on a large scale, it should be attractively presented; that it should explain and enthuse and should aim to make each person an authority on their own health. At the same time there is recognition that "razzmatazz" in health promotion and health education have become common and that there is a danger that they may have become the equivalent of "brown bread and aerobic circuses", distracting attention from the substantive issues which affect health while giving the impression of action.

The creation of a new public health movement requires a systematic approach which includes the collection and dissemination of health statistics and information on health problems and the ways in which they can best be tackled. Such information should be accessible and should be presented in ways which facilitate participation by the public in modifying the environment which shapes life experience. The provision of knowledge in this way to enable individual and collective action is a basic principle of health promotion but is one which may have to be fought for in a service in which the starting point is often the restriction of information.

High quality public relations is an essential ingredient in developing a dialogue with the public. In the Mersey context in 1984, this led to the commissioning for a 9-month period of a public relations firm on a contract basis. This gave the health promotion team access to the full backup of the skills of a major public relations firm at modest cost and enabled the production of two issues of a four-page broadsheet "Healthy news". This was distributed to health workers throughout the region, providing information about the regional strategy for health promotion and the activities of the health promotion team. It also generated extensive media coverage.

The involvement of health promotion personnel with the local media was recognized when a local radio station won an international award for a special two-hour programme on smoking.

Into the future

The definition taken as the baseline for health promotion in Mersey is "any combination of health education and political, economic and organizational activity designed to improve or protect health through its effect on the human environment and on behaviour". Clearly, this is a wide brief.

With imagination the possible areas of activity for health promotion are infinite while of course resources are finite. The emerging philosophy in Mersey has been to use a little to achieve a lot by harnessing goodwill and existing structures and manpower and by drawing in outside resources. So far this has achieved a great deal in a very short time. The initial goal of agenda setting and consciousness raising is well on its way to being met.

The next phase seems likely to be one of consolidation and considered innovation and is developing in three ways.

A change of emphasis of the regional health promotion team

The regional health promotion team which was initially an all-purpose and often very domestic group has now come to be much more focused and meets only 4-6 times a year. It is probably still not complete in its membership which will evolve with time. An effective involvement of the wider community is still required possibly by the establishment of a health forum. Its current task has moved on from initiating the debate to offering practical examples of the responses needed. It has done this by establishing short-life working groups to produce reports on key topics. So far, these include:

- information - a regional "korner" is now being undertaken for health promotion information - what is the information that we need at regional, district and local level for health promotion and what is practicably feasible? There is particular interest in the possibilities of local community surveys and one pilot has already been carried out;

- health education;

- regional training;

- public relations;

- regional nutrition policy.

Future working groups will probably include primary health care, occupational health and the health needs of the unemployed.

Development of models

The regional health team has seen one of its roles as being to develop model programmes in conjunction with interested districts. The link between region and the medical school department of community health provides access to the support needed for evaluating such programmes. So far, three such programmes are being developed:

- the reduction of teenage pregnancy and sexually transmitted diseases in Liverpool funded by the HEC;
- the encouragement of participation in physical activity by health-centre-based populations in Liverpool, funded by the Sports Council;
- the promotion of positive health in the elderly in Southport funded by the Southport health district and Mersey regional health authority.

Regionally organized peripatetic health fair

The success of the health fair at the International Garden Festival has led to a second Manpower Services scheme to continue it. This scheme employs 126 people as health promotion assistants working from converted buses as mobile health fairs which visit factories and other workplaces, shopping centres and health centres and large public events such as the Grand National. The original scheme has been elaborated to include the Health Education Council Look After Yourself (LAYS) programme, with health promotion assistants trained as LAYS tutors. It is also intended to encourage and support the development of self-help health groups in conjunction with the district health education units.

One feature of the health fair to be developed is the collection and collation of health-related data from those passing through it. It is hoped that this will itself provide one way of obtaining quota sample survey information on defined local populations, for use in planning and as a means of stimulating local responses.

Some principles of action

In developing a strategy and a programme of action the Mersey regional health promotion team has been guided by the WHO approach. In addition a local style has been developed which recognizes that in an area of deprivation and high unemployment the people themselves are probably the key resource. Job creation through the Manpower Services Commission Community Programme has been an essential part of the effort; a recognition of the need to build on what people are themselves interested in has been behind much of the activity so far particularly in relation to physical fitness and coronary prevention and the problem of drug abuse.

A high profile with the generation of "Healthy news" has been found to be effective in raising consciousness and of political benefit across the board and the use of high technology in the form of microcomputers has proved to be a potent method of giving ordinary people access to the power of information.

Acknowledgements

We wish to acknowledge the assistance of all those who have been instrumental in developing a strategy for health promotion in the Mersey region. In particular we would mention the Regional Officers and headquarters staff, and members of the health promotion team. The comparatively rapid progress which has been made to date has been as a result of a large number of

people being willing to find new ways of working both within a large bureaucracy and across into other sectors outside the health service. Those involved are too numerous to mention individually.

REFERENCES

1. World Health Organization. *Global strategy for health for all by the year 2000*. Geneva, World Health Organization, 1981.
2. World Health Organization. *Alma-Ata 1978. Primary health care*. Geneva, World Health Organization/United Nations International Children's Emergency Fund, 1978.
3. World Health Organization, Regional Office for Europe. Regional targets in support of the regional strategy for health for all. *In*: *Die allgemeinpraxis: das Zentrum der ärtzlichen Grundversorgung*. Zurich, Gottlieb Duttweiler-Institut Rüschlikon, 1981, p. 83.
4. Vuori, H. Primary health care in Europe - problems and solutions. *Community medicine*, *6*: 221 (1984).
5. Horder, J. Alma-Ata Declaration. *British medical journal*, *286*: 191 (1983).
6. Department of Health and Social Security. *Care in action*. London, Her Majesty's Stationery Office, 1981.
7. Ashton, J.R. Towards prevention - an outline plan for the development of health promotion teams. *Community medicine*, *4*: 231 (1982).
8. Ashton, J.R. *Health in Mersey - a review*. Liverpool, University of Liverpool, Department of Community Health, 1984.
9. *Proposals for nutritional guidelines for health education in Britain - the NACNE Report*. London, Health Education Council, 1983.

THE HELPING NETWORK APPROACH: COMMUNITY PROMOTION OF MENTAL HEALTH[a]

by
Marc Pilisuk, Susan Hillier Parks,
Jacqueline Kelly & Elizabeth Turner

Study of informal assistance suggests the power of the natural social and familial networks in supporting health, providing referrals, and in generating direct assistance (1-4). It is clear that natural help and arranged mutual help activities provide both an amount and a quality of service that cannot be met by professional helpers in existing service institutions. This basic fact has led to increasing discussion of natural familial and indigenous community assistance as a component of the delivery of essential human services (3,5-8). The case for indigenous help is also founded upon a recognition of the problems experienced when rural or nonmetropolitan communities adopt programmes originally designed for urban centres. Frequently the difficulty lies in failure to recognize the power of the existing natural patterns of assistance or the importance of community leaders (1,9-11). Similar themes are reflected in studies of ethnically defined communities (12):

This article describes a model for community mental health development through means of indigenous community networks. The model was designed specifically for nonmetropolitan communities with increasing needs for social services and declining revenues for the development of programmes.

The Galt Helping Network Project (GHN) was conceived as a community support model for a rural community which integrated both the natural helping system and the formal mental health helping system to develop community awareness of mental health needs and resources. It sought to create a broader sense of ownership of the project, requiring participation of informal community leadership. Additionally, the model addressed the issue of how empowerment of the consumer can influence control of policy and planning of services.

The five major components of the helping network model are: (a) selection of the project staff; (b) developing a community umbrella group to provide guidance and sanction for the overall project; (c) identification of and contact with natural community helpers; (d) the development of natural helping teams for problem-solving on behalf of a family or individual in crisis or pre-crisis situations; and (e) the use of constituency-based problem-solving as a means for increased interaction between the community and services in addressing community-level issues.

---

[a] This paper was issued in: Journal of primary prevention, 3(2): 116-132 (1982).

The helping network project is intended to serve a transitional function as a catalyst within the community. It was conceived as a system with no special vested interest other than to assist the natural and professional helping teams to cooperate in such ways that community resources are maximized and that all community constituencies are served.

The potential for the recipients' resources to be used systematically for the mutual benefit of other consumers and providers remains generally untapped. For a helping system to be effective on a community basis, the GHN project assumed that a constituency must be recognized, empowered to organize and to articulate its priorities, and assisted, where necessary, to negotiate these priorities with other local constituencies.

Through means of workshops to identify goals, held first separately for user and provider groups and then together, the constituencies are provided with a channel for articulating their wants and priorities and negotiating them. A third workshop with representatives of both user and service provider constituencies facilitates the negotiation of their respective interests and priorities. This goal identification and priority establishment accomplishes several major tasks. First, it allows those service users who are generally the least represented in the development of programmes for their benefit, the opportunity to determine and articulate their priorities for human service programmes. Second, by developing action steps for each identified need, constituency leadership emerges as individuals volunteer to be responsible for specific steps. Third, the goal identification process provides an equal opportunity for service providers to identify their needs as professionals, and helps them clarify their perceptions of the needs of the community. Finally, the process of assisting the users of services to define their needs serves as a source of empowerment. This empowerment is demonstrated by the ability of previously neglected groups to negotiate their wants with service providers in a manner which balances the power disparities of the two groups a bit more equally. The net result of this is that both groups are able to communicate more clearly, thereby increasing the possibility for truly effective development of human service programmes.

The case study

Background

From its founding in 1869 through the 1960s the town of Galt had persisted as a socially cohesive, moderately growing, conservative, white middle-class community. Typical among small rural communities, everyone knew everyone else, and helping and supportive exchange among neighbours was commonplace. The decade of the seventies produced some notable changes. Galt's population of 5200 at the beginning of the Galt Helping Network Project in 1978 was increasing rapidly, and the town was becoming a bedroom community of Sacramento. Fourteen hundred single-family dwellings were built in three years' time and estimates for population growth in the 1980s were in the area of 50%, as residential developments were completed. Many of these new homes were government subsidized.

The relatively lower cost of living in this community brought dramatic demographic and social changes. Beginning about five years before the onset of the Helping Network Project, the Spanish surname census altered, changing its representation from 3% to approximately 20% of the Galt population. While the Mexican-American influx added to the proportion of children and youths, the elderly population also grew. The over-65 population grew to 19%, which equalled the anticipated national average for the year 2000 (data supplied by the US Bureau of Statistics, 1979). The under-19 population was an unusually high 29% of the total population, and a full 75% of the working population commuted to work to nearby Sacramento and outlying towns. It is notable that the influx of elderly, youth, and underprivileged groups with fixed or minimal incomes placed a strain on local services, while as a group their tax dollar contributions for local services were also at a minimum.[a]

The population included a special group of about 250 chronically mentally and/or developmentally disabled individuals residing in sheltered-care residences in and around the outskirts of the city. By the late 1970s, the privately operated residential board and care homes constituted the third largest industry in the town, following local retail businesses and farming interests.

Galt Helping Network Project

The two-year project was federally funded at a modest $35 000/year and administered by the Sacramento County Department of Mental Health.

The decision to locate the Helping Network Project in the city of Galt was based upon several factors. Galt was chosen, in part, because of a high concentration of mentally and developmentally disabled persons residing in board and care facilities. More important, perhaps, was the fact that newly emerging problems in Galt were exceeding the meagre resources of existing formal services while, at the very same time, state and county funds were being reduced (15). The selection of Galt by county mental health professionals is important when considering the theoretical concept of the programme, which was to be a locally-based preventive mental health programme using the resources of the community. The project did not result from a community-level policy, nor did the community invite the project into its midst. Under these circumstances, gaining entry into the community was a challenge requiring great sensitivity on the part of the project director, hired by the county, and the three volunteer staff members recruited by the director.

Project staff

By design, the project staff, paid and volunteer, retains the perspective of the director whose term with the community is temporary and whose interests stand apart from the various segments constituting the continuing community. The team strives for broader community involvement, whatever the outcome of such involvement may be, and retains a stance of neutrality to the content of community decisions. While the model works to make various interest groups better able to represent their own needs, the project staff works only to catalyse and facilitate the expression and negotiation of these interests and not to assert its own priorities.

---

[a] The negative consequences of boom town development have been studied elsewhere (13,14).

Umbrella group formation

The initial task of the project staff was to gain support and to organize a set of committed linkages on a community-wide level.

> If the support and involvement of formal and informal community leaders could be achieved, the project would not only have a better chance of succeeding during its 2-year lifespan, but also community ownership of its future would be enhanced (16).

According to the project model, the umbrella group serves both to advise and to legitimize the actions of the larger project. They are chosen because they are recognized as influential and usually occupy formal roles of leadership in the community. The influential set of community figures actually chosen in Galt were provided with early access to information about the process and with opportunities to provide suggestions. In this way the project mobilized a powerful segment of the community who would not be likely to fear or to resist the community changes which were to develop.

To select the umbrella group, project staff conducted interviews with individuals identified as community leaders either by virtue of their formal roles or by recommendation of knowledgeable community members. The interviews were designed to communicate project goals to determine priorities among various mental health needs in the community, and to uncover informal helping resources. The procedure produced a community umbrella group of approximately 20 individuals who were both influential in the community and willing to assist the project.

Early in the interview process, a meeting with the principal of the high school affirmed that problems he was confronted with at school usually originated in the home. When asked how the project could help him, he replied that he thought a community-wide needs assessment survey would be a helpful way to understand these problems. As interviews with community leaders progressed, project staff discovered considerable concern about the general problem area of families and youth in Galt. At the same time, again through grapevine inquiry, GHN developed a list of individuals known in the community to be particularly helpful to others, i.e. natural helpers. Thus, groundwork was being laid in two ways, that of organizing around an issue, and beginning to map the local informal support systems.

Of the 20 city leaders interviewed 12 came to the first meeting. They represented various interest groups in the town: the high school superintendent, a central person on the Chamber of Commerce, the past principal of the high school, the city manager, police chief, and other civic-minded business people. Within the broader umbrella group, this group of 12 assumed a more active advisory or project support function and agreed to sponsor community-wide meetings to assess services and determine priorities in Galt. During the course of the project, individual members of the group continued to support the project in various ways, through lobbying efforts and in procuring needed resources.

Constituency-based problem-solving forums

The umbrella group provided effective sponsorship for several community forums. The first series of forums utilized the structured constituency-based problem-solving techniques (17,18). This approach uses a series of goal identification workshops for determining priorities among unmet needs advanced by various (sometimes conflicting) interest groups in the community and for mobilizing community commitment. These carefully structured forums are particularly useful for the constituency of people likely to benefit from service, whose interests and power are typically more fragmented than those of the providers or funders of services. Fifty people from various sections of the community participated in the first series, devoted to assessing the needs of youth and families.

The forums developed a resource of community commitment around particular action plans which resulted in several community activities and policy recommendations. The three major areas of these forums emerged not only from the concerns of the initial umbrella group but also as outcomes from the concerns raised in meetings. The constituency-based problem-solving technique proved effective in (a) articulating the concerns of such groups as high school students, school officials, local business leaders, and agency representatives; (b) establishing some priorities around these concerns; and (c) developing an overall sense of community.

In February 1980 (during the project's second year), a community-wide forum was held to review services in Galt and to determine gaps and overlaps. This forum was initiated by a group of individuals who were active in the project's needs assessment activities the previous summer, and who were concerned about a proliferation of services and professional agencies which had suddenly "discovered" Galt. Citizens were concerned that agencies might compete for limited funds in a way that could result in detrimental programming for the community. With the assistance of GHN project staff, again employing the constituency-based problem-solving technique, this group hosted a forum of 40 persons with representatives from six agencies. Agency representatives described their programmes, and the discussion which followed resulted in the formation of an ad hoc, nine-member Steering Committee to assess the needs and services of Galt with greater sensitivity. This group met over a four-month period, studying current services, communicating with the Galt Interagency group, and eventually came up with a statement of recommendations. These recommendations were presented to the Mental Health Advisory Board and the Board of Supervisors of Sacramento County. As a result the county approved support for a mental health outpatient referral centre in Galt.

After their research and advocacy role was concluded, the group returned to the priorities that arose from the needs assessment workshop a year before, and chose recreation as its next focus. Since that time the group had expanded its membership and planned a community workshop to involve all local citizens interested in assessing recreation needs and developing a coordinated recreation plan for the city.

The Steering Committee continued to operate on an ad hoc, project-oriented basis drawing upon the original umbrella group as needed. The group resisted becoming a formal organization, preferring to maintain its independence from any single agency. The Galt Network was the primary catalyst and facilitator of the group, but did not direct or dictate what the group should do at the end of the two-year experiment. With the Galt Helping Network Project becoming part of a county mental health outpatient resource centre, the Steering Committee will need in the future to become even more independent of the GHN office and the question of how to accomplish this perpetuation without becoming a hide-bound institution was a major focus of discussion within the group.

Natural helpers

Natural community helpers are individuals who, without a designated service role, are consistent providers of assistance to a number of people in their community. In this model, the identification of natural helpers provides information about what kinds of supportive arrangements already exist, and where the gaps appear. These same natural helpers have access to information about community attitudes and interests that advisory boards frequently miss.

During the same period of time that project staff interviewed community leaders for the purpose of developing the sanctioning umbrella group, they also interviewed 30 persons, identified by the consensus method to be particularly helpful individuals. This was in keeping with a major project goal, i.e. to identify existing informal helping resources and supportive networks, and to make them more accessible to the community. The findings from these interviews were presented to a gathering of community, agency, county and state representatives, including many of the natural helpers themselves.

Although the GHN project provided some training for persons who volunteered their time to act as receptionists in the office, it did not provide generalized training for people who wanted to volunteer. The procedure for becoming a volunteer was intentionally simple, i.e. signing name, address, phone number, and a personal description of ways in which the individual thought s/he might be able to help another in the project Blue Book. Volunteers were prized for their own natural skills and not for how they could fit into structured project needs. This meant that many volunteers were not called upon frequently for their services, since the right "match" had to occur. But over the course of the two years, over 100 persons volunteered their time to the project in a variety of ways.

While GHN first found natural helpers through interviews with informants, the project gradually augmented the list by creating opportunities for more people to assume helping roles. Additions to the Blue Book were achieved mainly through a "service for service" method. Since no fees were charged for direct counselling, advocacy, or supportive services, persons requesting help were asked to sign in the Blue Book and describe in what way they might help others, as if they had come in as volunteers. This technique became an important part of the programme: it recognized the significance of reciprocity in the helping process, and addressed the need for people to perceive themselves as able to give, even as they must ask for help. During the second year, 15 persons became active helpers in this way. In addition, this approach was used with two special groups: chronically mentally disabled and juvenile offenders. The project arranged community service alternatives to sentencing for seven juveniles in cooperation with County Probation, and worked with the new Galt Police Juvenile Officer in implementing this method of diversion on a city level. The project assisted nine mentally disabled persons in finding volunteer and paid jobs in Galt as a means of helping to integrate them more fully into the community.

The variety of natural helping roles stimulated by the project defies easy summary. In addition to "service for service" the following forms were evident.

1. Natural helper advisers. Staff members received consultation from certain people who had been identified as informal "experts" about certain populations within the community. Sometimes these "experts" knew the client in question, and sometimes they simply provided general information. During the second year, these informal experts acted as advisers in 16 cases. They assisted in cases pertaining to single mothers, senior citizens, Mexican-Americans, mentally disabled, teenagers, primary school-aged children, and the unemployed. They frequently provided information on practical matters, such as child care, housing, jobs, and transport.

2. Natural helping referrals. When appropriate, the project staff linked each person who came for help with another person in the community who had some information or experience with the same problem. This could be someone who had experienced the problem (as frequently occurred in the "service for service" approach), or who simply had personal knowledge or secondary experience with it. An informal single-parents' network developed in this fashion. Other contact persons included senior citizens, young adults and Mexican-Americans. During the second year, 18 persons were used as natural helping referrals.

3. Working through existing natural helping networks. This refers to networks of people who acted as supports for a certain population. Some of these networks have included the Senior Citizens Club, the teachers' aides in the primary schools, the cafeteria workers in the high school. These groups used the services of GHN staff by asking for consultation, and were important in referring clients to the project. Twenty-seven per cent of the clients who requested help during the second year were referred by these people.

4. Community Friends project. In August 1980, a programme was instituted to bring volunteers from the Galt community to local residential homes one day a week to provide recreation and companionship to the residents. A core of six volunteers working under the supervision of a project staff member visited two homes over the first eight-week period, and expanded this effort to two more homes after the official project termination. Most of the volunteers were senior citizens and one was a mentally disabled person living in a more independent setting in Galt. The staff also planned to recruit high school students and other community members as the programme expanded. Ultimately, it was hoped that the residents who participated would grow to trust the Community Friends enough so that the relationship would continue on excursions outside the homes.

5. Summer youth activity programme. During a ten-week summer period, a project staff member coordinated an activity programme two afternoons per week with 20 youngsters aged 8 to 15. The programme was staffed with nine volunteers. The purpose of the group was to provide recreational and socialization activities for children, some of whom were identified as having behavioural and emotional problems. Volunteers provided general supervision and expertise on special projects. The youth programme was also aimed at making the children more aware of their community and its resources and was able to draw almost completely on donations for space and materials.

6. Delta College adult education programme. A project staff member organized a group of Galt citizens to assist in the design of an adult education curriculum to be offered through San Joaquin Delta College in Stockton. Courses developed included prevocational training for the mentally

and developmentally disabled, English as a second language, workshops for re-entry students, basic communication skills, as well as courses from the regular Delta curriculum.

Natural helping teams

These "teams" were composed of groups of persons involved with the life of an individual seeking assistance from the programme. The people were assembled under the direction of the GHN director who served as a problem-solving expert. The purpose of the helping teams was to demonstrate to the individual in crisis the number of concerned people in her/his life, and to use the collective skills of the group to provide support for the focal individual. The concept provides a demonstration of the power of cooperative problem-solving, and generally results in increased responsibility among group members for providing support (19).

On five occasions during the first year of the project, the GHN called together the support systems of focal individuals to facilitate a natural helping team meeting. Although three of the five clients who had natural team meetings reported improved communication among support system members and a better and clearer understanding of who was accountable for what services and actions, it was the project's experience that the natural helping team concept had greater potential for success with clients who were already known to several components of the professional helping system. The meetings were not considered to be useful by the larger community. The person requesting help, particularly for emotional problems or family conflicts, was extremely threatened by the notion of a "meeting" including friends, family, neighbours, and professional helpers to discuss his/her problem. In a rural community, "meetings" are viewed with some distrust. Although people tend to know a good deal about each other's private lives, they are not inclined to discuss these matters formally, especially in a group setting. Thus, while the project occasionally met with a client and a friend or family member, or informally linked a client with a natural helper in the community, full-fledged "meetings" did not fit the norms acceptable to the particular community.

Cinco de Mayo

In the area of community preventive services, the project staff made use of both the ideas arising from constituency-based forums and the person-power resulting from the emergence of volunteers. One of the more successful of the community activities was aimed at providing a sense of belonging and recognition for the community's growing Chicano population. The process began as a typical needs assessment addressed to the Mexican-American community. The highly flexible constituency-based problem-solving technique allowed room for a different agenda to arise.

An open house was held at the project office primarily for the Mexican-American community. Approximately 20 persons attended. As a result of that open house, and of additional information obtained through contacts with several different members of the community, it was decided that a needs assessment process would not be successful in the Mexican-American community. The reasons for this were varied. First, the Latin population of Galt, while substantial, was relatively new, having grown from 3% to 20% in the past ten years. Many Mexican-Americans in Galt did not relate to Galt as their primary social centre; a large number attended church in a nearby town, and most entertainment and recreational opportunities were located in the nearby towns of Stockton, Lodi, or Sacramento. There were two identifiable Mexican-American organizations in Galt, the Concilio, which had just undergone a change in leadership from a Latin director to an Anglo with a predominantly Anglo board; and the Catholic church, which itself was beset by some internal conflict. There were few recognized "leaders" in the community and, in general, people seemed quite reluctant to get together as a group to identify mental health priorities in the same way that the mainstream community had the summer before.

As a result, the project decided to join with three other local agencies in calling a meeting of Galt citizens who might be interested in planning a Galt Cinco de Mayo celebration. This cultural event is an extremely important holiday to the Mexican people, and is celebrated by large festivals in many surrounding towns and cities. Like many small towns, Galt held several festivals during the year, each highlighting a particular segment of the community or service organization. However, the participation of the Mexican-American community in these events had usually been minimal, and none of the events had any significance for the Mexican culture. Thus, for the Mexican-American community to sponsor a Cinco de Mayo fiesta was a strong statement of that minority's presence in Galt, a symbol of pride in their culture, and an affirmation of their place in the local scene.

The planning and actual occurrence of Cinco de Mayo in Galt was lengthy and difficult. Yet it provided an opportunity for the Mexican-American community to pull together towards a goal - and also catalysed leadership struggles. The project's interest in Cinco de Mayo was to show its support to the Latin community, to make known its services in an informal way, and to learn more about the Mexican-American people it aimed to serve. These purposes were met. A Mexican-American member of the Helping Network staff and her husband emerged as the prime movers of the festival and, through their involvement, the Helping Network gained the trust and support of many Mexican-Americans who would otherwise not have felt comfortable approaching GHN for help.

One of the more surprising side effects of this effort was the reaction of the "official" sector of the Galt community. The city Council proclaimed Cinco de Mayo a city holiday and the festival an official Galt event to be celebrated annually. Other civic organizations such as Jay-cees, Senior Citizens, and Boy Scouts participated in the festival. Further, an independent group, called the Galt Latin Organization, was formed to run the actual festival and to set up a scholarship fund that would benefit from the profits of the festival. These events, all "firsts" for the Galt Latin community, were catalysed by the GHN project. Personal relationships were formed to provide a foundation for future work with the Mexican-American people.

Summary and discussion

Starting with a small budget, a two-year mandate from the county and a basic model of operation, the Galt Helping Network Project proved to be illustrative of the value of community goals relevant to mental health outreach, mental health promotion, and to the quality of community life. The model led to the early formation of an umbrella group which supported a variety of subsequent activities. Constituency-based problem-solving forums enhanced participation and gave voice to previously unarticulated community concerns. These led to activities involving major segments of the Galt community. The identification of natural helpers proved an early resource for assistance to clients. Rather than trying to professionalize the already beneficial activities of these natural helpers, the project sought to incorporate them into a wider range of activities and to draw out the helping potential of increasingly broader segments of the population.

Some outcomes of the project were institutionalized to assure continuation. the outpatient resource centre, the Delta College programme, the Cinco de Mayo celebration and the "friendly visitor" programme are examples. Other activities of creative problem-solving and of warm and concerned volunteer activities can only be measured by the lasting effects which such activities have upon the participating individuals.

Of the various components of the model, some were better actualized in practice than others. In particular, the use of helping teams barely materialized. The reasons for this are related to the success of the one aspect of the model which is most central, i.e. constituency-based problem-solving. It was the use of this method which brought to light the values and concerns of various groups and which made the model capable of bending to the contours of the particular community in question. In Galt the rural and ethnic values regarding family privacy, i.e. who might properly be assembled to discuss the problems of a distressed individual, mitigated against the use of helping teams as a customary practice. Similarly the model permitted a gradual evolution of the form of the interagency advisory group from unorganized constituency groups to the Citizens' Steering Committee. One other major component of the programme, identification and use of natural leaders, worked well and provided the resource power behind a number of successful activities.

In projects aiming to exert an impact upon a whole community rather than upon a single target population one finds elements of prevention at work at various levels. The ethnic awareness and recognition through Cinco de Mayo and the Delta College opportunities are focused upon primary prevention. "Service for service" practices typically involved a secondary prevention focus, while elements of tertiary prevention could be observed in the outpatient resource centre, the network teams assembled to deal with family crises, and the "friendly visitor" programme.

The problems of assessing programmes which provide preventive services or services intended to promote mental health or to improve the quality of life, are formidable. However, certain outcomes of the Galt Helping Network Project and its unique synthesis of direct service and broader community approaches are obvious. Scores of individuals who had talents to assess needs and plan services were given an opportunity to do so. Others were identified whose capacities for assistance to individuals were utilized and given recognition in a variety of helping roles. The city gave formal recognition to its Mexican-American population through a celebration. People with a service to volunteer were brought together with others who needed the service, and counselling was provided to individuals in need without fees, incorporating natural or informal helpers where appropriate. None can say how many cases of psychotic breakdown, child abuse, or criminal behaviour may have been prevented. But a more cohesive and helping community has developed. This was no small achievement.

REFERENCES

1. Coward, R. *Considering an alternative for the rural delivery of human services: natural helping networks*. Paper presented at the Sociological Society's Annual Meeting, San Francisco, CA, 1978.
2. Gottlieb, B.H. The primary group as supportive milieu: applications to community psychology. *American journal of community psychology*, 7: 469-480 (1979).
3. Pilisuk, M. & Froland, C. Kinship, social networks, social support, and health. *Social science and medicine*, 12B: 273-280 (1978).
4. Stoler, E.P. *Growing old in the country: the role of informal support networks*. Paper presented at the annual meeting of the Rural Sociological Society, Burlington, VT, August 1979.
5. Collins, A. & Pancoast, D. *Natural helping systems*. Washington, DC, National Association of Social Workers, 1976.
6. Hawkes, G.R. Who will rear our children? *The family coordinator*, April 1978.
7. Howell, M. *Helping ourselves*. New York, Pergamon Press, 1973.
8. Schon, D.A. *Network-related intervention*. Paper prepared for the Network development staff, National Institute of Education, Washington, DC, March 1977.
9. Berry, B.A. & Davis, A.E. Community mental health ideology: a problematic model for rural areas. *American journal of orthopsychiatry*, 48(4): 673-679 (1978).
10. Lee, A. et al. Community mental health center accessibility: a survey of the rural poor. *Archives of general psychiatry*, 31: 335-339 (1974).
11. Mermelstein, J. & Sundet, P. Community control and the determination of professional role in rural mental health. *Journal of operational psychiatry*, 5(1): 3-12 (1973).
12. Fandetti, D.V. & Gelfand, D.E. Attitudes towards symptoms and services in the ethnic family and neighborhood. *American journal of orthopsychiatry*, 48(3): 477-486 (1978).
13. Bates, B.E. et al. developing comprehensive community helping systems in boom towns: the potential of informal helping. In: Davenport, J. & Davenport, J., ed. *The boom town: problems and promises in the energy vortex*. Laramie, WY, University of Wyoming, 1980.
14. Freudenburg, W.R. An ounce of prevention: another approach to mitigating the human problems of boom towns. In: US Commission on Civil Rights, ed. *Energy resource development: implications for women and minorities in the Intermountain West*. Washington, DC, 1979.
15. Pilisuk, M. The future of human services without funding. *American journal of orthopsychiatry*, 50(2): 200-204 (1980).
16. Kelly, J. *Galt Helping Network Project, six-month review*. Sacramento County, Department of Mental Health, 1978.
17. Bartee, J. & Cheyunski, D.V. A methodology for progress-oriented organizational diagnosis. *Journal of applied behavioral science*, 13(1): 53-68 (1977).
18. Bartee, J. & Kelly, J. Rethinking mental health policy. *Research in education monographs*, February 1979.
19. Speck, R. & Attneave, C. *Family networks*. New York, Pantheon, 1973.

MENTAL HEALTH PROMOTION IN THE COMMUNITY: HOW TO DO IT[a]

by
John M. Raeburn

There is no one way to do mental health promotion. But the approach described here just happens to be, I believe, the best. The basis for this outrageous claim is some twelve or so years of experience colleagues and I have had working in this field. Over that time we have developed a philosophy and a strategy that seems to work and which also seems to fulfil most of the ideals that people have about community-based activities. The name given to what we do is the *community power approach*.

In this overview I can do no more than present the barest bones of this approach, and much will be left unsaid. I would like to present it as a set of principles, with examples from our work to illustrate them.

But first I would like to raise just a few general issues. Today there seems to be a great deal of tension between the respective roles of professionals and "the community". Quite rightly, community people have become very suspicious of professionals, who seem to have a lot of power, and represent bureaucracies whose interests often seem removed from those of ordinary people. But it would be a shame if this became totally an either/or issue. There are at least some professionals who understand and respect community processes and who can lend their weight to promote them. And it is also true, regrettably, that the best intentioned community lay activities can founder for lack of resources and access to the corridors of power, which professionals can often provide. There are also skills that professionals have which are simply beyond those readily available to most community people. For example, shortly, I will argue strongly for the value of need assessment surveys. To have any credibility at all, these need to be properly done and one really needs to call on experts to assist. But what counts here, I believe, is the *type* of relationship that exists between professionals and community people. Professionals should be viewed primarily as resource people, with skills that can largely be shared. But the decisions about whether to use these skills, and what sort of role professionals play in any community endeavour, need to be made by community groups themselves. Typically, the pattern we have followed is to have quite a large professional presence at the beginning, until skills have been imparted, and then a gradual withdrawal until the community groups can function on their own, although they can continue to have back-up and support from professionals as they desire. But, throughout, the emphasis is on the strength-building and competency-building of community people.

---

[a] This article was published in Community mental health in New Zealand, 2(1): 22-33 (1985).

Another related issue is the basic location of mental health promotion activities. If one takes a bird's eye view of mental health promotion needs, it is very easy for the professionals and experts to take over and say, "We'll plan it centrally". This is already happening, I believe, in the area of health promotion generally, with the new Health Board set-up. At the new health promotion regional conferences in 1983 there was a strongly expressed desire by community people that planning for health promotion come largely from communities and regions. This was then largely ignored at the Wellington conference that followed, and in spite of the protests of a minority of us, the present centralist planning structure was set up.

Centralist planning of health promotion by "experts" in turn leads to thinking about national campaigns involving government, industry and the media, especially the media. A recent decision by a joint Health Department, Heart Foundation and Cancer Society Committee to put a large amount of money at their disposal (some $185 000) into an anti-smoking media campaign (this includes the advertisement on television with the song "I knew you had it in ya") is a good case in point. These campaigns are very expensive indeed, and their value for actually changing behaviour is almost totally unknown. I don't say that nationally planned campaigns, legislation, etc. are not important. But ultimately, we are talking about what individuals do with their own lives, and this requires a focus on the community level.

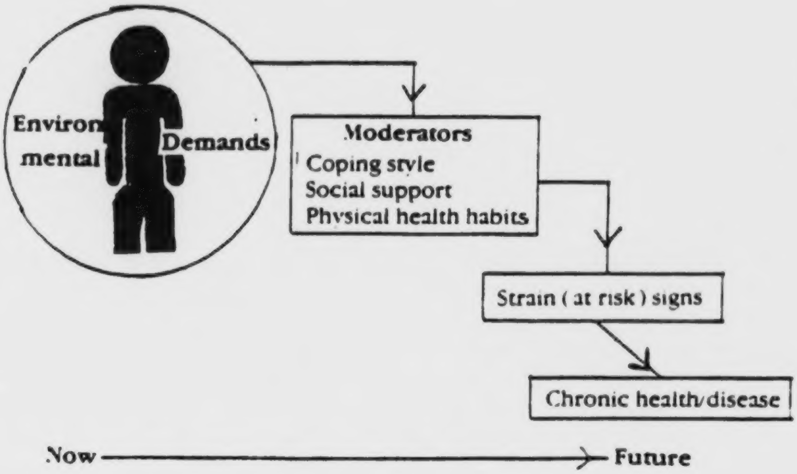
There is another important set of considerations here and that is: what do we actually mean by primary prevention and health promotion? Personally I don't like the term "primary prevention", and this is recognized by some who have suggested a new term "primordial prevention". The trouble with any use of the term prevention is that, in spite of rhetoric about wellness and healthiness, efforts in practice quickly revert to a disease and illness orientation. By definition, that's what prevention means - the prevention of disease. I much prefer the term health promotion. The assumption here, I believe, is that by developing healthy lifestyles and healthy environments, both social and physical, then people will generally be healthier and happier and, as a by product, the incidence of disease will be less. But the primary aim is healthiness, not the absence of disease. So long as we maintain the notion of primary prevention, it gives (I believe) an unduly important role to professionals - it is they who know all about disease. But as for healthiness - everybody knows about that! In short, our fundamental philosophy in the community power approach is to keep all interventions as close as possible to the natural, everyday habits of community life. Health promotion is not "something special", it is simply a facilitation of, and back-up to, what most people know anyway! Every community is full of resourceful, excellent people and it is capitalizing on their talents that counts, *not* calling in more professionals.

I will now quickly go over the basic principles of the community power approach.

1. *Spell out definitions, philosophy and objectives.* To some extent, this is what I have been doing. Anyone getting into mental health promotion needs to have full discussions with all concerned (especially at the community level), then write down exactly what they are on about. To sum up our own philosophy and objectives: we believe that mental health promotion is primarily a community matter, but it also needs back-up from legislative measures, media campaigns, industrial changes and governmental and official

agencies. By mental health promotion we do not mean first and foremost the prevention of specific mental disease, or even crisis intervention. Rather, the aim is complete mental and physical health (the two are inseparable) for as many people as possible. These factors in turn are believed to increase resistance to breakdown, either mental or physical. And what are the key ingredients to this state of positive healthiness? These are shown in Fig. 1, which is an adaptation of John French's person-environment fit stress model: it involves seeing the individual in his or her total, ecological, community context, with all the demands that that makes on each of us. What French showed was that if we are not up to meeting the demands of everyday life (if our person-environment fit is poor) then the result is "strain", which over time manifests itself as mental and physical disease. But this "strain" can be lessened or eliminated by certain factors, labelled coping style (French called this personality), social support, and physical fitness. In the first few years of our work, we concentrated on the social support aspect, and the result was the development of community houses: focal points in communities, positive places where people could get together to work on their own and their community's needs and build strong local networks. We still believe this is very important, but more recently, we have been giving more attention to the other two factors: coping style and physical health. Here what we are really talking about is "lifestyle". Although this concept has largely gained prominence in the physical health field, it applies equally, if not more importantly, to the mental health field. What counts is not how we react to isolated life events or crises, but the whole, overall coping habit patterns of our lives on a day-to-day basis. Look after the pennies of everyday life, and the pounds of big crises will largely look after themselves. In short, our aim is to have strong, resourceful people in strong resourceful local communities. Hence the name, community power.

Fig. 1. "Raeburn model" of health behaviour: the relationship over time of current adaptive functioning to long-term health



2. *Do community need assessments.* The community power approach assumes that most people already know what is good for them in a mental health sense. What is simply needed is a cohesive expression of these wishes, and the provision of resources and opportunities for people to work on their own needs, with professional back-up as appropriate. There are many ways to do community need assessment, but we believe there is no substitute for a properly conducted, random sample survey which guarantees that all sectors of the community have their say. We have now done several such surveys and what we find is that when activities and facilities are set up in accordance with what people say they want, then they really succeed. It makes simple sense. Mental health promotion usually means changing behaviour. Any amateur psychologist will tell you that for people to change, they need to be motivated. The process we are talking about here simply ascertains the key areas in which people are already motivated to change. Let me show you what I mean from the results of three surveys we did, in Birkenhead, Devonport and Kawakawa, three very divergent communities (Table 1). As you can see, there is a great deal of agreement between what people wanted in the general health/mental health lifestyle change area, and amazingly, two thirds or more of people in each community expressed an interest in one or more of these areas. Who says people aren't motivated to change?

3. *Design low-cost, positive, practical programmes in tune with these needs.* We have taken these and other results from surveys and set up programmes and activities which seem to meet these needs. This is done in continuing and full consultation with local people, so that they have the right flavour. We find that each such programme can take up to five years to develop, as it is checked out, altered and got to an optimal state. But then they really go. These programmes are always positive - not therapy, not disease prevention, but acquiring healthy successful habits of living. As far as cost is concerned, the aim is to have as many people in the community as possible able to use these programmes if they wish. It is often especially those on low incomes that we want to be able to come. So cost is an important factor. So, also, is educational level. We try to keep our programmes pitched at about third form level, so that they are readily comprehended by most people.

4. *Have programmes run and led by local lay people, who are good models, but provide expert back-up.* We find that the best people to run lifestyle change programmes are graduates of those programmes, people whose behaviour has changed by taking part in programmes and who believe in what is being done. But to sustain their participation, we find two things are necessary: strong support and back-up, and payment. The latter can be very modest, but it is essential.

5. *Emphasize self-management and long term changes.* One of the great faults of many pop therapies and self-development programmes is that they create dependencies. People need to keep coming back for more (and often paying large amounts in the process). Here, we believe it is crucial that people set their own goals, and see what they are doing as acquiring skills which are theirs to use in perpetuity. Not only is independence and self-reliance important, but so is having skills that will survive the termination of any group or class activity.

6. *Capitalize on community and social support.* All our lifestyle activities have a secondary and equal purpose of developing social support and community spirit, i.e. local people doing enjoyable and worthwhile things together. These forms of "natural" support (not dependency on professionals) are important for maintaining lifestyle patterns outside the group or class

setting. Social support is also a very motivating phenomenon; group pressure to keep up to the mark is one of our most important assets.

Table 1. Priorities for lifestyle activities in different communities

Priority Birkenhead (n = 267)	Devonport (n = 150)	Kawakawa (n = 50)
1. Fitness (31%)	Fitness (28%)	Fitness (42%)
2. Weight (26%)	Weight (16%)	Stress/tension (32%)
3. Stress/tension (19%)	Stress/tension (15%)	Weight (30%)
4. Communication (15%)	Smoking (11%)	Communication (28%)
5. Smoking (13%)	Communication (11%)	Budgeting (28%)
6. Fear/depression (11%)	Health promotion (9%)	Health promotion (24%)
7. Confidence (10%)	Drug education (9%)	Confidence (18%)
8.	Alternative medicine (7%)	Drug education (18%)
9.	Confidence (6%)	Smoking (14%)
10.	Fear/depression (6%)	Assertion (14%)
11.	Budgeting (3%)	Alcohol education (11%)
12.	Alcohol education (1%)	Fear/depression (10%)
13.	Marriage enhancement (1%)	Alternative medicine (8%)
14.	Assertion (1%)	Marriage preparation (8%)
15.	Marriage preparation (1%)	Marriage enhancement (8%)
percentage checking one or more 68.5%	70.7%	90.0%

7. *Do meaningful evaluation.* For this, you will probably have to call in the experts. It is crucial to check out whether what is being done is working. Is it having desirable results from all sorts of points of view, personal, community and otherwise? At the very least, reliable pre-activity, post-activity and follow-up evaluations are essential. Preferably, some sort of controls should also be built in. I would like to show you some of the evaluative data we have collected from three of our mental health promotion programmes, Waistline, Unstress and Superhealth.

In Waistline, we have figures for over 400 people (Table 2). As you can see, the average weight loss over the twelve-week programme is 5.6 kg and this is largely maintained on follow-up. These results put us up with the very best obtained by any weight control method in the world, and we have a much lower drop-out rate than most.

Table 2. Waistline

(1) Pre/post test

	Pre-test	Post-test	6 mth	12 mth	t	p
Treatment (n = (407)356)						
Weights (mean kg)	71.97	66.33			35.2	.0001
Net loss		5.64				
Drop-out rate		12.5%				
Comparison ("slimline") (n = (26)13)						
Weights (mean kg)	70.03	68.44				
Net loss	1.59		1.76	n.s.		
Drop-out rate		50%				

(2) Follow-ups

	Pre-test	Post-test	6 mth	12 mth	t	p
Six-month group (n = 125)						
Weights (mean kg)	71.23	65.53	66.63	-	9.30	.0001
Net loss		5.60	4.55			
Gain on follow-up			1.05			
12-month group (n = 96)						
Weights (mean kg)	70.86	65.48	66.48	66.60	6.38	.0001
Net loss		5.38	4.38	4.26		
Gain on follow-up			1.00	1.12		

For Unstress this analysis is on over 200 people (N.B. only 70 in Table 3). We take a wide variety of measures, all of which show markedly reduced levels of anxiety and tensions, and markedly increased levels of wellbeing.

Table 3. Unstress

		Pre	Post	Change	% change	+[a] or -
Hopkins symptom checklist	T[b]	145.6	117.4	28.2	19.3	+
	C[c]	-	-	-	-	
Spielberger anxiety inventory 1	T	40.8	34.7	-6.1	-15.0	+
	C	37.5	39.5	2.0	5.3	-
Spielberger anxiety inventory 2	T	45.9	37.0	-8.9	-19.3	+
	C	46.2	45.7	-0.5	-1.1	+
Analogue scale of wellbeing	T	53.0	75.4	22.4	42.3	+
	C	57.5	55.5	-2.0	-3.5	-
Analogue scale of relaxation	T	43.9	72.5	28.6	65.1	+
	C	39.1	41.1	2.0	5.1	+
Analogue scale of coping ability	T	52.1	75.1	23.0	44.1	+
	C	62.5	56.1	-6.4	-10.24	-

[a] + = positive "behavioural" change;
- = negative.

[b] n = 70 for treatment group.

[c] n = 8 for control group

Superhealth is our newest programme (Table 4). Its aim is to present the basics of overall health and mental health promotion, concentrating on relaxation, nutrition and exercise, although people can set their own goals in a wide variety of areas; for example, stress, sleep, smoking or social relations. Again, the results are dramatic. This course is only six weeks long, but people go on improving for months afterwards. All these courses have beneficial side effects, which bears out our argument about not necessarily having to concentrate on disease processes as such.

Table 4. Superhealth: early results

Goal	N choosing goal	% Fully achieved/ well on way	% Moderate progress	% Moderate + progress
		Results after 6-week course (N = 76)		
1. Stress	35	58	11	69
2. Exercise	30	40	37	77
3. Weight	27	41	26	67
4. Healthy eating	25	52	16	68
5. Sleep	9	33	33	66
6. Social relationships	7	70	0	70
7. Other	8	25	50	75
		Results at 6-month follow-up (N = 17)		
1. Stress	14	72	21	93
2. Exercise	12	42	17	59
3. Weight	11	45	9	55
4. Healthy eating	8	50	25	75
5. Other	4	50	25	75

Other improvements: (smoking, drinking, tension headaches, tension, etc.) similar to Unstress, and most show *increased* improvement at six months.

The results from Unstress (Table 5) show that although almost none of the following topics was specifically covered in the course, they all show marked improvement: alcohol use, tranquillizer use, mental complaints requiring treatment from a professional, and so on.

Table 5. Unstress: per cent "with problems" reporting behaviour changes post course

	1 Problem gone	2 Positive change	1 + 2 Total positive change	3 No change	4 Negative change
Smoking (24%)[a]	21.6	21.6	43.2	49.0	7.8
Drinking (35%)	29.3	28.0	57.3	38.7	4.0
Tranquillizers (33%)	27.5	39.1	66.6	26.1	7.2
Tension (59%)	23.6	60.2	83.8	14.6	1.6
Headaches (33%)	14.4	56.9	70.9	26.1	2.9
Sleep (35%)	28.6	35.6	64.4	32.9	2.7
Physical health (24%)	4.0	56.0	60.0	34.0	6.0
Mental treatment (13%)	17.8	60.7	78.5	17.8	3.6

[a] Percentage of total N (210) reporting these problems.

Table 6. Unstress: overall post-course satisfaction[a]

Very positive	68.9%	89.4%
Positive	20.5%	
Neutral	3.8%	
Negative	4.5%	
Very negative	2.3%	

[a] (N = 210)

Our conclusion is that the appropriate focus for mental health promotion is the community, that resources need to go in that direction, but rather than just pouring in good money after bad, a new relationship between professionals and the community needs to be worked out. It needs to be one where the community calls the shots, but where professionals with special areas of expertise can come in and provide skills and back-up where necessary. Above all, community need assessment is the key to all this. If we listen closely, honestly and with goodwill to what people are really saying, we can't go too far wrong.

APPLICATIONS OF SOCIAL SUPPORT THEORY TO HEALTH EDUCATION: IMPLICATIONS FOR WORK WITH THE ELDERLY[*]

by
Meredith Minkler

As members of a profession with a strong theoretical grounding in the work of social psychologist Kurt Lewin (1,2), health educators long have been aware of the critical role of social contacts in influencing behaviour. While much of the profession's interest traditionally has centered on the role of peers and other interpersonal contacts in facilitating attitudes and behaviour conducive to health, increasing evidence suggests that social ties may play a critical role in health maintenance and disease prevention which may be largely distinct from the influence such contact persons exert on health behaviour per se (3-5). The theory linking social support networks and health, consequently, provides an important additional conceptual base for effective health education practice.

In this paper, the theoretical basis of the social support and health relationship will be discussed. Major hypotheses concerning the mechanism of action whereby supportive ties work to decrease illness susceptibility and maintain health will be examined, along with empirical data which either support or cast suspicion on these hypotheses.

The key theoretical properties of social networks will be described, along with some of their implications for practice and examples of their application in the design of health education programmes for the elderly.

Other important roles of the health education practitioner, e.g. in educating policy-makers and advocating for changes in the broader sociostructural environment within which networks operate, will be discussed only briefly in this paper. Implicit throughout, however, is the assumption that social and institutional policies need to be developed which are conducive to network formation and to the alleviation of the often socially marginal position of the elderly in American society.

Definition and properties of supportive networks

Social support networks have been defined as "that set of personal contacts through which the individual maintains his (or her) social identity and receives emotional support, material aid, services, information and new social contacts". Such networks can include immediate or extended families, friends, neighbours, coworkers or professionals, but generally are independent of formal care giving institutions (6).

---

[*] This article was published in Health Education Quarterly, and is based in part on a paper presented at the 108th Annual Meeting of the American Public Health Association in Detroit, MI, on 23 October 1980.

As Fischer (7) has noted, while individuals create their own social networks, they must do so from among a small net of socially structured alternatives. As individuals' social positions differ, so do their alternatives and hence, their social networks and social behaviours. A "choice-constraint model" of the formation of social ties is utilized by Fischer in social network analysis. People thus are seen as encountering different opportunities for forming social relationships and as having varying resources with which to pursue those ties depending on their location in the social structure.

While a wide variety of network dimensions or properties have been identified and described in the literature, several key properties appear basic to network analysis. These are:

- network size, or the number of persons involved in a given network;
- geographic dispersion, or the degree of network confinement to or independence of a particular locality;
- density, or the extent of interconnectedness between members of a given network;
- member homogeneity, or similarity on such dimensions as age, social class or sex, or the extent to which members share common experiences, e.g. bereavement, hypertension or alcoholism;
- strength of ties, or the intensity of emotional and other bonds between members and the degree of intimacy or confiding which transpires;
- reciprocity, or the direction of exchange and the degree to which members participate both in giving and receiving;
- multiplexity, or the variety of types of exchange that occur between members (e.g. seeking help, confiding a problem, providing material or emotional support) (8).

As will be discussed later, the various properties of support networks have important implications for health educators interested in designing programme interventions for and with the elderly which aim in part at the maintenance or strengthening of supportive ties.

Social support and health: the theoretical base

As Snow & Gordon (9) have pointed out, social support or social network "theory" is not inclusive enough to provide the kind of comprehensive explanatory scheme which truly constitutes theory in the rigorous sense. At the same time, "the concept is well suited to guide the development of 'middle range theory' that consists of a limited set of assumptions from which specific hypotheses can be derived and tested by empirical observations". It is in this more general sense that the terms social support and social network theory are utilized in this paper.

The basic theoretical position linking social support to health was put forth by the social epidemiologist John Cassel (3) when he noted that disrupted social ties affect the body's defence system, so that people become more susceptible to disease in general. What specific disease they get seems to be a function of other risk factors, a view well summed up by Sir William Osler in the statement "it is much more important to know what sort of patient has the disease than what sort of disease the patient has".

The precise mechanism of action linking social support and health is still unknown. At the same time, Satariano & Syme (10) have elucidated three major hypotheses which bear examination.

Social networks and preventive health behaviour

The first hypothesis is particularly compatible with health education theory and suggests that the existence of a supportive network may mean that an individual is being encouraged by his or her social contacts to take preventive health action or to seek needed medical treatment.

Langlie (11) has provided some evidence for this view in a recent study of approximately 400 urban adults which revealed that at least with respect to preventive health behaviours of an indirect nature - behaviours such as nutritional habits, exercise, medical and dental check-ups and health screening - people who had frequent interactions with neighbours and friends scored significantly higher on the extent to which they engaged in these preventive health practices than those who did not.

At the same time, however, while students of preventive health behaviour may ask whether a person is married or has close family and friendship ties, these same studies generally fail to examine in more depth whether these contact persons encourage or reinforce the individual in his or her preventive health practices. In the case of marital status, for example, a large body of evidence has indicated that married persons live longer and suffer less illness in almost every category than single, widowed or divorced persons (12). Yet it is not possible to determine from the existing data whether this is because the spouse is encouraging his or her mate to smoke less, exercise more, eat a nutritious diet, or if the mere presence of a spouse is the critical variable.

The hypothesis that social ties work to maintain health primarily by encouraging healthier lifestyles, in short, cannot be supported or refuted on the basis of existing evidence.

At the same time, an increasing body of literature suggests that health behaviour itself does not account for the important role that social ties are known to play in influencing morbidity and mortality.

Some of the strongest evidence for this position is presented in a study by Berkman & Syme (13) in which the mortality experience of a random sample of 7000 residents of Alameda County, CA, was followed over a nine-year period. Sample members were all part of a population that had been studied extensively in 1965, so that baseline data were available on many aspects of these people's lives, their health and their behaviour. Social networks had been measured in a simple manner: subjects were asked (a) whether they were married; (b) the number of close friends and relatives they had and how often they were in contact with these people; (c) whether they attended church, and finally (d) the extent of their informal and formal group associations.

Disease morbidity and mortality rates from all causes appeared to be related to this simple index of social ties. Most significant, however, was the finding that those study subjects with few ties to other people had mortality rates 2-5 times higher than those with more ties. These mortality differences were independent of self-reported health status, and of such traditional risk factors as smoking, drinking, exercise and obesity. They further were independent of a variety of psychological variables and of utilization of health services. The strong link found between social ties and mortality rates in this study appeared for both sexes, for all ethnic groups, and across socioeconomic lines.

Berkman & Syme's research, in short, would seem to suggest that while social support is a strong predictor of morbidity and particularly mortality, the mechanism of action here does not seem to be the encouragement of healthier lifestyles by members of one's supportive network, since the relationship holds up when controls are used for all of the traditional risk factors.

Social support as a mediator of life stress

A second hypothesis concerning the mechanism of action whereby social ties influence and determine health status suggests that the support provided by social networks increases coping ability and hence helps "short circuit" the illness response to stress. Stated another way, social ties may act in a supportive manner by providing resources for coping with life problems and this in turn may increase the individual's resistance to disease (1, 10).

While the evidence in support of this hypothesis tends to be of an indirect nature it is nevertheless worthy of review.

Some of that evidence derives from a recent study by Gore (14) which examined the protective effects of social support for men who were forcibly unemployed due to the closing of a plant. The 110 men in this study were examined at five different points from the announcement of the plant closure to two years following the event. Levels of serum cholesterol were measured, as were illness symptoms, symptoms of depression, perceived economic deprivation, self-blame and degree of social support. The latter was measured in terms of the unemployed person's perception of whether his spouse, friends and relatives were supportive and in terms of the perceived opportunity for engaging in social activities. Gore found that men with higher levels of social support were significantly less likely to exhibit mental and physical health problems than those who perceived themselves as having less social support during this critical time period.

Unanticipated job loss (as in the case of plant closure) differs in many ways from retirement at the end of one's career, but it is nevertheless worthy of note that, in the case of retirement as well, some data exist which indicate that successful adjustment and positive health outcomes may be importantly related to whether or not one has strong supportive networks away from work which may help ease this transition. Atchley (15) thus has demonstrated that both retirement and bereavement appear to be less traumatic life events from the perspective of morbidity and mortality outcomes for persons living in small townships than for those in large urban areas. His research suggests that the rurally based older person is more likely to have close contacts with neighbours and kin than his or her urban counterpart, and that these social ties may help to provide a protective cushion against the harmful physiological and psychological effects which such stressful life events are likely to trigger.

In an earlier study, Burgess (16) found poorer retirement adjustment among blue collar than among white collar workers attributable to the relinquishing of most meaningful social contacts among the former who tended to have fewer social ties outside the workplace. In a separate analysis, Palmore (17) has suggested a possible link in this regard between retirement and longevity. In his view, when retirement does involve the giving-up of most valued social contacts - as is more frequently the case for blue collar than for white collar workers - the resulting diminished involvement and activity may contribute to shortening the life span. While the evidence on the mental and physical effects of retirement is ambiguous at best (18), Palmore's hypothesis is an interesting one, and suggests the need for further examination of the role which social ties and the loss of such ties in conjunction with retirement may play in influencing adjustment to this particular life transition.

Further research in this area may help to substantiate the hypothesis that social support may work to maintain health by increasing coping abilities such that when a stressful life change occurs, the individual has better resources for dealing with it. Such studies should focus not merely on the existence of social support, however, but rather on what kind of support was available and whether or not it clearly was related to coping.

Social ties and perceived sense of control

A third hypothesis concerning the mechanism of action whereby social support may help people to remain healthy builds in part upon the second hypothesis. Antonovsky (19) and Satariano & Syme (10) thus have suggested that over time, peoples' perceived sense of support from others may lead them to a more generalized sense of control. In their view, it is perhaps this more global feeling of control and confidence that serves as the missing link explaining why social support would be so critically related to health.

To examine the control hypothesis, Langer & Rodin (20) conducted a study among nursing home residents which was designed to determine whether patients who were given more responsibility and control would exhibit better physical and mental health than those who remained in a more typical dependency-producing nursing home environment.

Two groups of nursing home residents were selected and matched for socioeconomic level and for physical and psychological health status. Members of each group were then given a plant. Residents assigned to the treatment or "responsibility enhanced" group were told that the plant was theirs to take care of and that how it fared would depend largely on whether they remembered to water it and care for it appropriately. At the same time, they were told that they were competent men and women who should be making more decisions for themselves and participating more actively in their own care. Members of the control group were also given a plant, but they were told that the staff would take care of it just as the staff would continue to take care of them and serve them, since they were in the home to be cared for.

Within several weeks the investigators found a noticeable difference between the two groups. The "responsibility enhanced" group exhibited significant improvement on a variety of measures of physical and mental wellbeing and further showed a visible increase in activity level. Even more dramatic was the finding that eighteen months following the intervention, the responsibility enhanced group had a mortality rate only half that of the control group (15% vs. 30%). As Langer (21) has pointed out, findings like these lend credibility to the notion that many so-called "aging problems" may in fact result from an environmentally or socially induced loss of control. Furthermore, it is perhaps a perceived sense of "supportive exchange" - not simply perceiving that one can count on others, but also that they depend on him or her to some extent - that helps people to develop and maintain this more general sense of responsibility and control.

Studies examining sense of supportive exchange and health status are unfortunately in their infancy, and data are not yet available which shed much light on the role of this variable in influencing health. Preliminary research in this area is attempting to measure supportive exchange among the elderly through a series of questions designed to determine, for example, the extent to which the elderly see themselves as making major personal decisions, the frequency with which others turn to them for advice in decision-making, and the degree to which they feel that others rely on them in specific types of help-giving activities. The concept of supportive exchange highlighting the reciprocity dimension of social support is seen as importantly supplementing the existing focus of attention on social networks, since measures of the latter have tended to examine social contacts and perceived support from others, with little emphasis on the individual's role in the provision of such support. As Antonovsky's work, and research like that of Langer & Rodin suggest, this neglected variable of help giving may also be of importance in contributing to a sense of control which in turn may be conducive to health.

Social support, health status and "social marginality"

As suggested above, none of the hypotheses concerning the mechanism of action whereby social support contributes to health maintenance and disease prevention can be directly supported or refuted by the existing data.

At the same time, a common thread appears to run through these various hypotheses, which lends additional support to the basic theoretical position linking social support and health.

Pilisuk & Marston (6) thus have noted that persons at high risk for a wide variety of pathological states tend to share the common denominator of social marginality. The latter is described as often reflecting "weak and impermanent ties" with one's community, and has been hypothesized by Syme & Berkman (22) as being a plausible explanatory factor accounting for the high rates of morbidity and mortality for all causes among the poor. Social marginality, in short, is seen as an often unrecognized adjunct and contributor to such problems as inadequate nutrition, housing and medical care so often associated with inequalities in income and opportunity, and helps to account for the higher illness and death rates of low income persons in our society.

As a group at high risk of becoming poor, becoming ill and losing their traditional sources of social support (as through a geographic move or the death of a spouse) the elderly are also particularly vulnerable to becoming socially marginal. Indeed, aging in America is itself seen by many as a time of societally-induced social marginality. Rosow (23) thus describes retirement as the beginning of the roleless role, and Kelman (24) has discussed the difficulties related to "the meaning and significance of being a non-worker in a social order where social status and self worth, as well as subsistence, are closely tied to productive functions".

Serious efforts to end the marginal social status of the elderly would, of course, involve major structural transformations of the society itself, such that the value of human beings is less closely associated with their productivity as measured chiefly in terms of labour force participation.

At the same time, conscientious efforts to facilitate social support among elderly persons may in turn facilitate their own empowerment, and their individual and collective physical and mental health.

As Pilisuk & Marston (6) have suggested, supportive ties may provide a form of "social inoculation" which can help those who either traditionally have been without supportive ties or who recently have experienced a disruption of their previously existing sources of social support. The remainder of this paper will focus on the role health educators may play in facilitating social network development and maintenance among the elderly who are at high risk of social marginality.

Some specific dimensions of social networks will be reexamined with reference to the implications they may have for the effective design of intervention programmes. Several examples of existing programmes will be used to demonstrate various network theory applications in practice settings.

Social support and the elderly: special concerns and implications for practice

In their recent analysis of help-seeking by the frail elderly, O'Brien & Wagner (25) noted that the popular notion of "independent living" is a myth since everyone, and particularly the elderly, is dependent on others for continued survival. The question this poses for policy, they suggest, is "what can be done to promote those forms of human interconnections which appear to promote maximum opportunities for wellbeing of the elderly?".

Before examining this question from a health education perspective, a brief review of some salient background concerning this nation's "fastest growing minority" (26) is in order.

Contrary to prevalent belief, the vast majority of the 25 million Americans aged 65 and over (95%) reside in the community; indeed, even among persons aged 80 and above, 7 of every 8 live in the community (27). While 80-86% of persons aged 75 and over suffer at least one chronic illness, only 17% are unable to carry out their major activity, and only 1 in 10 are bedfast (27).

At the same time, up to an estimated one third of the community-based elderly require some degree of long term service. Such support, and the more extensive care required by the frail elderly in the community, is most commonly provided by family members, with families providing an estimated 80% of all care of the elderly in the community (28).

Approximately 56% of the elderly are married, and 4 out of 5 have at least one surviving child. As Treas (29) has noted, however, the pool of family providers for the elderly is sharply delineated by geography and increased longevity, with many adult children themselves older persons having limited energy, and financial constraints imposed by their own impending retirement, the college education of their offspring, etc.

The pool of friends, neighbours and acquaintances of elderly persons is also limited by a variety of social and environmental factors, including transportation difficulties, lowered income and in some areas, fear of crime on venturing outdoors. Cohen & Sokolovsky (30) have noted that such "environmental factors", as opposed to disability or health factors, are the primary determinants of level of sociability among some groups of elderly, e.g. those in low income inner city hotels. Concern with the promotion and maintenance of supportive ties among the elderly, consequently, must focus both on the nature of social networks themselves and on the environmental contexts within which networks operate and which may either promote or hinder the building and maintenance of supportive ties.

Fostering networks through programme design: some lessons from theory

In looking at programme design strategies aimed at fostering network development and nurturance among the elderly, it becomes clear that many of the earlier mentioned properties of social networks have important implications for the development of effective interventions. The examples provided here are illustrative of only a few of the many avenues which merit attention in this regard.

The dimension of network size has particular relevance for practitioners concerned with programme design and implementation for the elderly. Thus, while most older persons are, as noted earlier, involved in supportive networks comprised of family members and friends, cross-sectional data have shown the networks of the elderly to be smaller than those of their younger counterparts (31).

Several investigators (30, 32) have demonstrated that the number of social contacts an individual has may bear an important relationship to his or her ability to cope with stress, irrespective of how weak or strong these connections may be. Such findings, coupled with the earlier noted vulnerability of the elderly to disruptions in their traditional sources of social support, suggest the utility of providing opportunities for increasing the number of social contacts which elderly persons may experience.

The offering of health education programmes through senior centres and other sites frequented by the elderly is contributing to the development of interaction opportunities for potentially large numbers of elderly persons. As the single most numerous community service providers to the elderly in the United States, senior centres are playing an increasingly important role in direct provision of a variety of health services, including health education.

Particularly of interest here are those programmes, e.g. the Wallington Wellness Project in Seattle, Washington, which involve groups of older persons over extended periods of time in health promotion efforts requiring their regular interaction with one another.

Operating on the premise that wellness education can take place at any point along the long-term care continuum (33), the Wallington Wellness Project offers a comprehensive programme of health education stressing nutrition, stress management, physical fitness and environmental awareness. The latter category includes a consideration of how to improve one's own environment through assertiveness, as well as how to work with others in advocacy and related approaches to improving the overall physical and social environment.

Clients participate in a 21-week programme during which they meet for one three-hour session per week. While hard data are not yet available, interim findings have been encouraging, and 16 senior centres have implemented the programme since its inception. Peer training is being provided at the end of each 21-week session such that elderly participants can become co-facilitators. Indeed, it is anticipated that by the third cohort, most training will be offered by the first group of programme graduate (33).

Such programmes as the Wallington Wellness Project not only have the potential for increasing network size, but further may contribute to increasing the strength and multiplexity of ties among members by facilitating peer interaction and communication over time. Finally, to the extent that such programmes conscientiously encourage peer support and peer education as a part of the total programme effort, the degree of reciprocity of exchange between group members may also be enhanced.

Of probably greater significance than the size of supportive networks is the strength of ties experienced by members. In particular, the positive health-related consequences of having a close friend or confidante have been documented with respect to the elderly. Lowenthal & Haven (34) thus have demonstrated that such age-related life stressors as bereavement, retirement and decreased overall social activity are significantly less likely to result in declines in morale or increased susceptibility to mental dysfunctions if the individual experiencing these traumas has an intimate friend or confidante.

In her study of elderly residents of a low-income housing project, Hochschild (35) similarly demonstrated the importance to overall health and wellbeing of the close personal relationships formed between residents.

A recent cross-sectional study of adult Californians' attitudes regarding mental and physical health revealed that with the exception of the family, the most widely used source for coping with psychological difficulties was confiding in a close friend (36). While no differences were noted between men and women in the extent to which this coping strategy was reported, significant age differences were found, with 48% of all respondents reporting the behaviour, but only 28% of those 60 and over stating that they were able to confide in a friend. It was not possible to discern from these data whether the relative non-use of confidantes by the elderly resulted from the real or perceived unavailability of close friends, a reluctance to use friends in a confidante capacity, or both. Confiding in friends, however, appears to be an important operational aspect of the role social support may play as a mediator of life stressors. As such, the apparently large unmet need for confidantes among some elderly persons merits further attention.

Gottlieb & Todd (37) have suggested that engaging in a simple network analysis or mapping might help individuals conceptualize their own "natural support systems" as a basis for problem solving. The Support Development Group which they developed is an action research methodology which includes introducing the topic of social networks, involving participants in the mapping of their own personal networks and then facilitating discussion of their network and social support patterns with a group of peers.

In their role as facilitators of consumer education, health educators could usefully adapt a version of the Support Development Group methodology for use with groups of elderly persons. By increasing the elderly's appreciation of the importance of supportive ties to health maintenance, and by encouraging them to examine carefully their own social networks and potential sources of social support, the health educators may help older persons focus on the often neglected "social health" dimension of their total health picture.

The dimension of reciprocity provides a third example of a social network property with special relevance to work with older population groups. Health education programmes for the elderly thus should pay particular attention to the importance of mutual, rather than unidirectional exchanges among older persons. The prototypic health fair, for example, in which the elderly client is "given" information, screenings, etc., but not asked for anything in return might usefully be replaced by a model in which the participant is offered the chance to volunteer his or her time, ideally in the process of learning a skill, such as blood pressure measurement, which might then be offered in other settings, e.g. in one's housing unit or neighbourhood.

The building of peer education and peer support components into health education programmes for the elderly provides an important example of the application of the reciprocity principle of social support in practice settings.

One such attempt to foster both the giving and the receiving of support and aid is embodied in the Arthritis Self-Management Program at Stanford University in Palo Alto, California (38). Over 60 individuals, most of them elderly persons with arthritis, have been trained as lay leaders for work with groups of their peers. Potential lay leaders take part in an 18-hour training programme which stresses both content and group process. Each new group leader is then paired with an already functioning leader for an internship period, during which the former is helped to sharpen his or her skills in group leading and in communicating information effectively.

Over 1200 arthritics have worked with lay leaders in completing the two-week intensive course and three-month follow-up which stresses exercise, joint protection and appropriate use of medication. Pre- and post-tests have revealed a significant decrease in pain among participants, as well as an increase in knowledge and in exercise level (38). An equally important programme outcome from the perspective of this paper, however, is the significant investment of the lay leaders in the project, demonstrated in the fact that on moving to other geographic areas, several have taken the course with them, establishing groups on their own through local community colleges and other settings.

The Arthritis Self-Management Program in short has enabled the elderly recipients of new knowledge and skills to then share this information with others through a peer education mechanism which has effectively served the needs of both teachers and learners.

As suggested above, health educators involved in the design of health education programmes for the elderly should take into account the various properties of social networks which may then help to increase programme responsiveness to the possibility of increasing network opportunities.

In a more direct way, some health education programmes have focused explicitly on intentional network building, aimed, for example, at decreasing social isolation, and such often related problems as alcoholism and depression among socially marginal groups of elderly persons. The Senior Health Education Project in San Francisco's low-income Tenderloin area is one such programme which has focused on developing support groups among isolated residents of six low-income single-room occupancy hotels populated primarily by elderly persons. As such, it is an example of an attempt to increase the network size, density and strength of ties among a relatively homogeneous population group. Baseline data collected in 1978 revealed the average hotel resident to be an elderly white male, never married, with few living friends or relatives. Most reported having few social contacts with persons either in the hotels or outside.

Blood pressure screenings and refreshments served one morning per week in the hotel lobbies were utilized as an initial incentive to encourage isolated persons to congregate in the hotel lobbies. Following one year of attempting to develop a "sense of community" among the residents, the health educator facilitators helped establish ongoing tenants groups which meet regularly in the hotels and plan activities to involve other residents in a conscientious effort at network building. While it is too early to quantifiably measure the influence of small group involvement on the health and morale of participants, significant qualitative changes have been observed by outside facilitators, particularly in the development of social ties between residents (8). Also worthy of note has been the development, in many participants, of a broader age and class group consciousness such that common problems faced by the elderly poor (frequent evictions as property values increase, inferior treatment by health care providers, increased vulnerability to muggings and theft) are viewed as collective problems and action is sought to bring about change.

The environmental and social policy context of social networks: a final note

This paper has focused primarily on the hypothesized relationship between social support and health, the theoretical properties of social networks, and the implications of some of these theory-based findings for the design of intervention programmes for the elderly.

At the same time, it was recognized that the broader social environments within which social networks may operate must be responsive to the social conditions and personal and collective needs of the elderly if such networks are to develop and flourish.

While a detailed discussion of the latter topic is beyond the scope of the present paper, it is introduced briefly here in a bid for a more thorough examination of this contextual dimension of the social support and health relationship by health education theorists and practitioners. As Snow & Gordon (9) have noted,

> "network considerations are useful in assessing the impact not only of specific interventions but of social and institutional policies as well. The inadequacies of some social policies affecting the elderly are reflected, for example, in transportation policies in which one can get a minibus for health but not for social purposes; or in the nature and location of housing which leads to social isolation, or in the emphasis on clinic-based rather than home-based services; or in the limited alternatives to institutionalization making it difficult or impossible to support the individual in situations closer to family and social ties".

In light of these observations, it may well be that one of the most important roles of the health educator in facilitating network development and maintenance among the elderly would involve the education of policy-makers. Indeed, to the extent that the social environment of the elderly is shaped by policies antithetical to the building and maintenance of social ties, health educators have an important education and advocacy role to play in helping to change such policies.

On the institutional level, such change might involve the reordering of narrow, individually oriented institutional policies and programmes such that they focus instead on elderly persons within the context of their families or other supportive milieus. By utilizing network analysis as a systems approach, agency staff may be helped to view patient or client behaviour "in terms of a client's location within a network system" (30). At the same time, such policies as unnecessarily restricting hospital visiting hours may be critically reviewed to determine whether they might be replaced with more flexible health-promoting approaches. In the latter case, the hospital-based health educator armed with an understanding both of his or her institution and of the role of social support in accelerating recovery might be in an important position to advocate for this and related policy changes.

On a broader scale, recent federal budget cuts have had the effect of reducing or eliminating some programmes (e.g. senior escort services, special transportation and congregate nutrition programmes) which were aimed in part at reducing isolation and increasing social network development among the elderly in need.

Health educators knowledgeable about the social support and health relationship and aware of the role such programmes can play in facilitating the development of social ties may help to mobilize support for the restoration of such programmes and services. Further, by working as advocates for the elderly, they may take pro-active steps, e.g. in working through their local delegates to the 1981 White House Conference on Aging, to help introduce and support proposals and legislation aimed at improving those social conditions (e.g. inadequate income and transportation) which work at present to constrain the development of social ties among the elderly.

Ironically, as the 1978 Report of the President's Commission on Mental Health has cautioned, recent efforts to strengthen personal and community support systems carry with them the possibility that such supports may be used to "justify public policies which would withhold from various communities and individuals the resources they need to obtain professional and formal institutional services" (9).

In working to facilitate social network development and maintenance among the elderly, the health educator must also help to ensure that the support of "natural networks" is not viewed or utilized as an alternative to needed professional or institutional services. Rather, by stressing the social structural constraints placed upon network building by some of the inadequacies in existing social and institutional policies, health education practitioners may be able to advocate for quantitatively and qualitatively better services and formal programmes which in time may serve to broaden the net of alternatives within which social relationships may be formed.

Summary and conclusions

The growing body of evidence linking social support and health has important implications for health education practice. Social support theory hence may provide a critical supplement to earlier theoretical formulations suggesting that social contacts may be a major factor in influencing individual attitude and behaviour change.

While several hypotheses have been put forth to explain the "how" of the social support and health relationship, none has been empirically proven to date.

What does appear clear, however, is that social support plays an important indirect role in health maintenance independent of any direct role social contact persons may play in influencing an individual's health-related behaviours or lifestyle.

For the elderly, social support may play a particularly important role in maintaining health and decreasing susceptibility to illness.

The elderly thus were seen to be both more vulnerable to illness and more likely to experience a breakdown in traditional sources of social support than younger persons.

Theoretical properties of support networks, including the size of one's network, the strength of ties experienced and the degree of reciprocity of exchanges, were seen as having important implications for the design of health education programmes responsive to the social health needs of the elderly. The Wallington Wellness Project in Seattle, Washington, the Arthritis Self-Management Program in Palo Alto, California, and the Tenderloin Health Education Project in San Francisco, California, each were described as incorporating some of the principles of social support theory in practice settings.

An action research methodology developed to enable people to map and discuss their natural support systems was also discussed as a potentially useful tool for work with the elderly.

Social network development and maintenance was seen throughout this paper as critically influenced by the broader social environment within which such networks are operative. The role of health educators in advocating for change in those social and institutional policies which hamper network building and maintenance was stressed, as was the related need for working to end the often socially marginal position of the elderly in American society.

REFERENCES

1. Lewin, K. Studies in group decision. In: Cartwright, D. & Zander, A., ed. Group dynamics, research and theory. Evanston, IL, Row, Peterson, 1953.
2. Lewin, K. Conduct, knowledge and the acceptance of new values. In: Lewin, G.W., ed. Resolving social conflicts, selected papers on group dynamics. New York, Harper & Bros, 1948, pp. 56-68.

3. Cassel, J. An epidemiological perspective of psychosocial factors in disease etiology. *American journal of public health*, *64*(11): 1040-1043 (1974).
4. Syme, S.L. Social and psychological risk factors in coronary heart disease. *Modern concepts of cardiovascular disease*, *44*(4): 17-21 (1975).
5. Cobb, S. Social support as a moderator of life stress. *Psychosomatic medicine*, *38*(5): 300-313 (1976).
6. Pilisuk, M. & Marston, P. *Delivery of social support: the social inoculation*. Paper presented at the Conference on Lifestyles and Health, San Francisco, California, 13-14 January 1979.
7. Fischer, C.S. *Networks and places*. New York, Free Press, 1977.
8. Pilisuk, M. & Minkler, M. Supportive networks: life ties for the elderly. *Journal of social issues*, *36*(2): 95-116 (1980).
9. Snow, D.L. & Gordon, J.B. Social network analysis and intervention with the elderly. *The gerontologist*, *20*(4): 463-467 (1980).
10. Satariano, W.A. & Syme, S.L. Life change and disease in elderly populations. Coping with change. *In*: McGough, J. et al., ed. *Biology, behaviour and aging*. New York, Academic Press, 1981.
11. Langlie, J.K. Social networks, health beliefs and preventive behaviour. *Journal of health and social behaviour*, *18*(September): 244-260 (1977).
12. Syme, S.L. *Social support: networks and health. A review of research*. Paper presented at the 2nd Annual Symposium on Lifestyles and Health, San Francisco, California, 13 October 1979.
13. Berkman, L.F. & Syme, S.L. Social networks, host resistance, and mortality. A nine-year follow-up study of Alameda County residents. *American journal of epidemiology*, *109*(2): 186-204 (1979).
14. Gore, S. The effect of social support in moderating the health consequences of unemployment. *Journal of health and social behaviour*, *19*(June): 157-165 (1978).
15. Atchley, R. *Widowhood and retirement as relatively "trivial" life events*. Presentation at the Institute of Human Development, University of California, Berkeley, March 1979.
16. Burgess, F.W. Occupational differences in attitudes towards retirement. *Journal of gerontology*, *18*: 203 (1958).
17. Palmore, E. The relative importance of social factors in predicting longevity. *In*: Palmore, E. & Jeffers, F.C., ed. *Prediction of life span*. MS, Lexington Press, 1971.
18. Minkler, M. Research on the health effects of retirement: an uncertain legacy. *Journal of health and social behaviour*, May-June (1981) (in press).
19. Antonovsky, A. *Health, stress and coping*. San Francisco, CA, Jossey Bass, 1979.
20. Langer, E.J. & Rodin, J. The effects of choice and enhanced personal responsibility for the aged. A field experiment in an institutional setting. *Journal of personality and social psychology*, *34*(2): 191-198 (1976).
21. Langer, E.J. *Old age. An artifact*? Paper presented to the Conference on Biology and Behavior of the Elderly, National Academy of Science, Woods Hole, MA, 1979.
22. Syme, S.L. & Berkman, L. Social class, susceptibility and sickness. *American journal of epidemiology*, *104*: 1-8 (1976).
23. Rosow, I. *Socialization to old age*. Berkeley, CA, University of California Press, 1974.
24. Kelman, H. The underdevelopment of evaluative research on health services for the elderly in the U.S. *International journal of health services*, *10*(3): 502 (1980).

25. O'Brien, J.E. & Wagner, D.L. Help seeking by the frail elderly: problems in network analysis. The gerontologist, 20(1): 78 (1980).
26. Brotman, H. The fastest growing minority: the aging. American journal of public health, 64: 349-352 (1974).
27. Shanas, E. & Maddox G.L. Aging, health and the organization of health resources. In: Binstock, R.H. & Shanas, E., ed. Handbook of aging and the social sciences. New York, Van Nostrand, Reinholt Co., 1976, pp. 592-618.
28. Brody, E.M. Women's changing roles and care of the aging family. In: Hubbard, J.P., ed. Aging, agenda for the eighties. Washington, DC, Government Research Corp., 1980, pp. 11-16.
29. Treas, J. Family support systems for the aged: some social demographic considerations. The gerontologist, 17(6): (1977).
30. Cohen, C.I. & Sokolovsky, J. Clinical use of network analysis for psychiatric and aged populations. Community mental health journal, 15(3): 203-213 (1979).
31. Abeles, R. Gerontological health maintenance: social science perspectives. Paper presented at the 108th Annual Meeting of the American Public Health Association, Detroit, MI, 22 October 1980.
32. Granovetter, M.S. The strength of weak ties. American journal of sociology, 78: 1360 (1973).
33. Fallcreek, S. Health promotion for older persons. An intergenerational experiment in Seattle. Paper presented at the 108th Annual Meeting of the American Public Health Association, Detroit, MI, 20 October 1980.
34. Lowenthal, M.F. & Haven, C. Interaction and adaptation. Intimacy as a critical variable. American sociological review, 33(1): 20-30 (1968).
35. Hochschild, A. The unexpected community. Englewood, NJ, Prentice Hall, 1973.
36. California Department of Mental Health, Office of Prevention. A study of California public attitudes and beliefs regarding mental health and physical health. In: Pursuit of wellness, 1(1): 65 (1979).
37. Gottlieb, B.H. & Todd, D.M. Characterizing and promoting social support in natural settings. In: Munoz, R.F., ed. Social and psychological research in community settings. San Francisco, CA, Jossey Bass, 1979, pp. 183-231.
38. Lorig, K. et al. Outcomes of arthritis community education - a randomized controlled study. Paper presented at the 108th Annual Meeting of the American Public Health Association, Detroit, Michigan, 23 October 1980.

HEALTH PROMOTION IN ACTION:
PRACTICAL IDEAS ON PROGRAMME IMPLEMENTATION[a]

Background

In January 1984 a new programme in health promotion was established in the WHO Regional Office for Europe. This is the first programme of its kind in WHO and its development has had strong support from Member States. Plannings began in 1981; since then a number of meetings of people from a wide background has helped to clarify the special approach to such an initiative. This work has been documented by the Regional Office in a number of working papers and publications.

In July 1984 a WHO working group met in Copenhagen to discuss "Concepts and principles of health promotion". A discussion document was produced which began to clarify some of the most important issues in relation to the development of policy and programmes in health promotion.

As part of the continuing process of discussion, WHO Regional Office for Europe jointly organized a follow-up workshop in July 1985 with the Welsh Heart Programme Organization, Cardiff, United Kingdom, to consider "Practical aspects of implementing health promotion programmes".

This discussion document has been developed as a result of this meeting drawing upon the final report of the working group. It is not intended to reflect the proceedings of the meeting which are separately documented in a detailed report available, together with background papers prepared by participants, from the Regional Office.

Introduction

Health promotion is the process of enabling individuals and communities to increase control over the determinants of health and thereby improve their health. Such a process requires the direct involvement of individuals and communities in the achievement of change, combined with political action directed towards the creation of an environment conducive to health.

The purpose of this document is to translate this unique concept into principles which underpin programmes in action. By its radical nature, health promotion often represents a challenge to existing professional groups, vested commercial interests and cultural norms. Alternatively, health promotion programmes should offer important opportunities for effective public participation and intersectoral cooperation for health. Health promotion programmes also involve the use of diverse but complimentary methods or approaches. This discussion document, therefore, is intended to highlight some of the key challenges and opportunities which need to be addressed in the development of health promotion programmes.

---

[a] This article was published in Health promotion, 1(2): 187-190, Oxford, Oxford University Press (1986).

For practical reasons the document is focused on the development of structured, larger scale health promotion programmes, rather than those that evolve spontaneously or in a less formalized way. It does not address in detail the important issues of research and evaluation, and healthy public policy which will be the specific subjects of other meetings and documents in this series.

Establishing a programme

Finding the right entry point

Establishing the best entry point is a critical task. Genuine participation by the community requires identity with an issue, and a level of understanding about what action might be taken. The concept of health promotion encompasses a positive notion for health as a resource for everyday life. However, many find it difficult to conceptualize health and can more easily identify with everyday settings such as schools and the workplace, issues such as environmental safety and tobacco control, or diseases such as coronary heart disease and cancer, as areas for health-improving action. Thus it would seem both reasonable and legitimate to initiate a health promotion programme where a common level of understanding exists. This is often a concern about specific settings, issues or disease. From such an entry point a health promotion programme can develop.

Developing a constituency and providing leadership

Little will be achieved unless there is popular support for change. Existing social networks and groups in the community need to be identified, consulted and involved once an entry point is established. Examples of such groups might include women's groups, trade unions, voluntary groups and so on. Professionally qualified workers clearly need to be involved but may not be best placed to undertake this role directly.

Leadership is required to provide a focus. This leadership needs legitimization. This may come from government or other formal sources, but equally may come from perceived status within a community. The latter source of legitimacy will frequently be a more potent force for change. Hence traditional and obvious disciplines are not always the best source of leadership. In practice programmes are often established with "formal legitimacy" but initially lack the necessary constituency of support - in which case special efforts need to be made to win this support.

Creating an identity

In many situations it is helpful to create a positive public image with which people can identify. The use of special symbols or logos are an example of how this might be achieved. The written and broadcast media have a special role not only in consolidating identity but in creating public debate by raising awareness of the need for change, and to create a climate of opinion for change. Media support can be sought in a planned way, but use might also be made of opportunities which arise unpredictably through local events unconnected with the programme.

Making a start

Much is already known about the practical aspects of programme implementation and use should be made of this knowledge in establishing a programme. Developing an effective network of contacts nationally and internationally could be particularly helpful in understanding the process of health promotion and building on past success and failure.

Identifying and involving the community

Involving a community or communities is not a simple task. It is, however, an essential component of health promotion programmes. To involve requires understanding and empathy. The needs, aspirations and characteristics of the population have to be identified and fully understood by those leading a programme.

Community analysis can be quantitative, using routine sources of data and/or specially mounted surveys. Qualitative information is of equal importance. This can be obtained, for example, through discussions with professional groups and elected bodies or public meetings, personal interviews and so on. Community advisory panels for a health promotion initiative can be particularly helpful. While careful review and analysis of the situation is necessary, it is essential that such activities are conducted within specified time limits to concentrate the mind and increase the likelihood of positive action.

Achieving short-term goals

Success breeds success. Motivation for change can be enhanced if attractive short-term goals are put forward and can be easily monitored. The most important short-term goal is to involve the community by generating awareness of the need for action. This in itself usually generates future motivation. All progress should be identified and widely communicated. Positive feedback is a great motivator, as is practical example. Achieving progress through small successes such as setting up groups, or achieving change in an organization can open doors for future larger-scale successes.

Winning resources

The importance of developing and coordinating an infrastructure for the implementation of programmes should be emphasized. This network resource has considerably more potential than large sums of money spent centrally.

In practice, however, few health promotion programmes achieve a reasonable resource base at the start of the work. Winning support, be it money, or personnel or services can be achieved as part of the process of involving all sectors of the population in the process of change. The more individuals and organizations becoming involved in the programme, the more likely that they will actively participate, reorientate and revitalize the programme. For example, many voluntary groups have fund-raising capabilities and personnel who can contribute to the programme.

Adopting a comprehensive approach

There are a number of approaches to promoting good health both at the level of the individual and of the community. The relative combination of each should be carefully considered. There is great scope for synergy of action, one approach supporting and enhancing the other.

Personal education and development

This approach includes improving knowledge and understanding about the causes and determinants of health, and teaching new skills. The promotion of self-esteem and the development of skills of self-empowerment are central components of an educational strategy. Personal contact is especially powerful and examples include the opportunities provided through teacher/pupil and doctor/patient contact.

Personal services

These include formal services which provide practical help. They can include traditional preventive medicine services such as immunization and family planning, as well as lifestyle services designed to provide support for stopping smoking, losing weight, keeping physically fit, etc. Services are not necessarily provided by health and social agencies: individual and group support on an externally organized or self-help basis should also be harnessed and fostered.

Mass media information and education

The media can raise public awareness and create a climate of opinion of change, as well as offering information and advice. The media can also act as a cue for actions. Approaches include social marketing and news information. Skills teaching can also be provided through distance learning projects, e.g. radio, TV, newspaper, correspondence courses, etc.

It should be emphasized that the use of the media alone without supporting community-based activity is unlikely to bring about changes conducive to health.

Community organization

Self-development is a fundamental part of the health promotion process. It is essential to involve communities by mobilizing resources, be they human or physical to develop and reorientate a programme. Examples might include support for the formation of local self-help and "pressure groups", and the development of local facilities and services. Supporting and assisting in the training of opinion leaders so that the diffusion of innovation is accelerated can be an important part of the process, as is developing networks for informal social support.

Organizational development

Good health should be an organizational goal. Encouraging organizations to accept this for their staff, clients or members is an essential part of the process of health promotion. Policies can then be implemented to widen health choices, e.g. for nonsmoking areas, for the development of exercise and changing facilities, healthy catering services, staff counselling and so on. Key organizations such as schools and hospitals have an exemplary role.

Environmental measures

An environment conducive to health is essential. This includes the physical environment at home, at work and in public places. Building on the successes of traditional public health (such as safe water, adequate sanitation and pollution control) examples of the "new public health" might include better housing design, road design and the provision of smoke-free areas.

Economic and regulatory activities

Creating a social and economic environment which protects and improves health is vital. Central and local government together with providers of goods and services, themselves have a major responsibility here. Approaches can include fiscal measures (e.g. alcohol taxation), legislation (e.g. reducing fat, salt and sugar in processed food) and widening or curbing the availability of services and products relevant to health (e.g. using agricultural subsidies).

Intersectoral collaboration

Health promotion requires close cooperation of sectors beyond the traditional health, education and social services. Commerce, industry, agriculture and transport, for example, also have an important role. This means that those leading health promotion initiatives should have a broad range of experience and backgrounds and should actively facilitate intersectoral cooperation.

Anticipating opportunities and challenges

Responding to vested interests

Health promotion often represents a challenge to existing professional groups, vested commercial interests and cultural norms. The relevance of these obstacles should be recognized and potential difficulties planned for. It is better to take the initiative rather than simply to respond to the actions of others.

Introducing new developments with the active participation of a community rather than by imposing them from outside will help overcome some obstacles. Incentives can also be provided to encourage change, e.g. training, materials, funds, publicity and status to key individuals. However, care must be taken not to establish new forms of professionalization whereby health promotion activity is seen as the exclusive domain of one group.

Providing mutual support

Those with vested interests may seek deliberately to undermine health promotion activity. This can be demoralizing, particularly when workers are under pressure because of the scale of the work. Isolated individuals are particularly at risk and the need for support networks for health promoters should be recognized. Networks should be established, where feasible, at regional, national and local levels.

A longer perspective regarding vested interests should be fostered. It will not always be possible to win all encounters. Sometimes a short-term setback can be more effective in the long run. But once there is public commitment to a cause, progress will be made.

Using the power of information

Free access to relevant and intelligible information is an important part of the health promotion process. It can provide strong motivation as well as setting the direction for action.

Special attention should be given to take the various opportunities for informing communities about the need for action and the progress being made. A range of approaches should be used so that all sectors of the population are reached. The potential, for example, of interactive broadcasting, testimonial support, distance learning technology, public meetings and community events should be explored.

Assimilating action into the community

All programmes initiated by an external agency must have a clear end-point. From the outset there should be definite plans for assimilation into the fabric of the community. Changes are more likely to be supported and maintained if the members of the community feel a sense of ownership and partnership, and hence responsibility.

Assimilation begins by involving community leaders at the outset. Activities are then not so much imposed but self-generated. However, external leadership may still be required for this process and it is helpful to provide a range of practical suggestions of ways in which a carefully phased withdrawal can be achieved. Reference to what others have achieved in similar settings and contact between groups with common aims are both useful.

A continuous process of devolution and sharing should be encouraged, even though performance may not appear to be as "good" as that achieved by well experienced lay or "professional" workers. By "letting go" wherever possible, health promotion will remain organic and flexible; able to respond to new challenges.

VII. TAKING NOTE OF SOME DILEMMAS

CANADIAN PERSPECTIVES IN HEALTH PROMOTION: A CRITIQUE[a]

by
Ronald Labonté and Susan Penfold

Introduction

Health promotion has rapidly become the new vanguard concept in health programming, absorbing even the older practice of health education under the sprawling goal of "preventing physical and mental ill health through the promotion of better personal habits and the elimination of self-imposed health risks" (1). Although health professionals often bemoan the low budget priority health promotion programmes receive, such programmes have none the less attained a considerable degree of visibility both provincially and federally within just the past five years. In assessing what the priorities of health promotion programmes should be in the 1980s, this article will raise and discuss two simple questions: first, do current health promotion programmes work; second, (and more to the point of our argument) are lifestyle risks really the major reason for the poor health of many Canadians?

Do health promotion programmes work?

The answer to the first question is a qualified "yes". Within the parameters of current health promotion definitions, most programmes are successful in creating an impact on at least some of the people some of the time. Let us look at some examples.

- Anti-smoking campaigns of the past decade had an obvious impact on smoking behaviour. Although increasing numbers of teenagers (especially young women) continue to start smoking, even greater numbers of adult smokers have found the willpower to quit (2).
- Nutrition promotion and education has evidently made a dent on consumer consciousness. Why else would Madison Avenue executives struggle to outdo each other with claims that their food products are more nutritious than those of their rivals?
- A large health promotion campaign in British Columbia on venereal disease was so successful that, despite consumer confusion over the name change from VD to STD [sexually transmitted disease], clinic attendance rose to record heights. The campaign had to be put on hold pending completion of larger facilities and the addition of more staff.

---

[a] This article was published in Health education, pp. 4-9, April 1981.

- Fitness and exercise promotion has been successful enough to encourage plush condominiums to feature racquetball courts and gym facilities. Sporting magazines are becoming a major staple in magazine shops. Fitness programmes are constantly being advertised and sport shops are looking less like the inside of a locker room and more like the interior of a high-fashion boutique (3).

We realize that we are not quoting a battery of research studies to validate the claims that certain health promotion programmes warrant a round of qualified applause. Although such research and evaluation studies are not unimportant, it is evident that *any* information on how to become healthier, especially if it keeps popping out from buses, newspapers, radio, television, posters, pamphlets, and even family allowance cheques, will have *some* effect in shaping behaviour. Human behaviour is largely dependent on the nature and quantity of information existing in the environment.

If we are making at least some headway, why was yet another conference on health promotion called to examine priorities? Why are we health educators continually engaging in the struggle to reappraise our discipline, our objectives, our methods, our very *raison d'être* (4)? Because, as we all readily admit, health promotion programmes simply do not work for most of the people most of the time and our lofty goals are far from being attained. That reality is a hard one to accept for people whose bread and butter, professional status and sense of self-worth stem from occasionally showing that they are having a real effect on the world.

Yet to have that effect, to create a dramatic impact on the health of *all* Canadians, is not impossible. It requires, in part, addressing the social context in which personal lifestyle choices are made - something which most current health promotion programmes fail to do.

Current philosophy: blaming the victim

The biggest reason why health promotion programmes reap few of their intended benefits (be it improved health standards, health cost-containment (5), or even a more health-conscious public) is that despite the "massification" (6) of their messages through all media channels, they are none the less directed towards isolated individuals. It is also politically significant that these programmes, in rendering health and disease a matter largely determined by individual behaviour patterns, have thrown a thick smokescreen over a host of factors which are far more influential in creating illnes: poverty, sexual inequality, racism, occupational hazards and industrially created environmental pollution. The impact of these "social pathogens" will be summarized shortly. For the moment, let us examine how well we now manage to blame the victim.

In 1974, Marc Lalonde published his famous *New perspectives on the health of Canadians* (7), and the modern practice of health promotion was eloquently equipped with a philosophy and a new methodology - the "health field concept" - which viewed health as dependent on such factors as lifestyle, environment and health care organization. Unfortunately, the health field concept never jelled into a unified practice, and both Lalonde and subsequent health educators/promoters have tended to view the different health factors as discrete phenomena largely unaffected by each other. The effect of Lalonde's report was to create the impression that health is primarily dependent on individual lifestyle choices. The current poor health status of Canadians is attributed to a "grisly litany of self-imposed risks" (8). If only health educators could convince people to stop smoking, drink less, eat well, walk a couple of blocks a day, practise stress reduction, stop popping pills, use seatbelts, drive carefully and curb their promiscuous sexual urges, good health might be the norm rather than the exception.

In construing health in such an individualized fashion, the social context in which personal choices are made remains hidden. A recent *Dialogue on drinking* television ad, for instance, portrays a woman in a bar describing a job interview, the "skills" of ten years of family work she offered her employer, and the drink she had before the interview to take the edge off her anxiety. All persons should certainly be cautioned about their "stress-managing" use of alcohol, yet there is a harsher reality behind the situation of the ad. The sexual asymmetry of Canadian society still relegates to women all child-rearing responsibilities, fewer educational and employment opportunities than afforded men, and only half a man's earning power when they do find a job (9). To present a woman's "alcohol stress management syndrome" without adopting a critical position on women's inferior social status is to hold, by default, individual women individually accountable for the very social inequality which clearly influences the dynamics of their drinking behaviour.

In subtle, often unintentional and always invidious ways, the "blame the victim" syndrome of health promotion programmes places the responsibility for a person's poor health and patterns of unhealthy behaviour wholly upon the individual. By logically extending this implicit position (which, make no mistake about it, is at the core of most health promotion programmes) we must conclude that people actually *choose* poor health. We are further led to believe that, without professional intervention and many educational/promotional strategies designed to cajole, lead, motivate, or somehow "change" these passively self-destructing individuals, the Canadian public will increasingly choose disease over wellness. The individual thus ends up the "health villain", behaving contrary to good, holistic human nature and in ways that are just plain irresponsible. Our society, with its pervasive sexual and class inequality, occupational and environmental health hazards, and the widespread stress such socially induced problems create, is accepted as "the best of all possible worlds" and is left free of any accountability for the myriad health problems which individuals now face.

This may seem a bold accusation, yet consider some of the contradictions inherent in health promotion programmes. The most obvious (and hence, less odious) one relates to alcohol and tobacco. Government subsidies to industry and its own taxation revenues coexist with government-sponsored programmes aimed at reducing product consumption. Both realities are enveloped at all times in an economic context in which the "right" of an industry to accrue profits from products which engender disease is never questioned. The Canadian unemployment crisis is easily manipulated as a rationale for maintaining the tobacco industry's pathogenic existence (9), just as other industries argue that the benefits of reducing occupational hazards and environmental pollution must be weighed (by whom?) against the economic costs (i.e. decreased industrial profits). Thus, one lot of government policies and programmes says "produce, consume!" while another accuses that "doing so is detrimental to your health and a symptom of personal irresponsibility".

Outright prohibition of the alcohol and tobacco trades is now, and has been for some centuries, incompatible with our liberal democratic society. As health professionals, we are all aware of the dilemma this economic and political situation has created. What we sometimes forget is that this duplicity is as obvious to the people we wish to reach with our behaviour-changing messages, and that this policy schizophrenia could lead many of them to reject our overtures as mere tail-wagging-the-dog righteousness. This does not mean that we should stop telling the "truth" about cigarettes and alcohol but it does hint that perhaps the way we say it needs to be more socially critical. We need to become more honest about the political and economic reality of the alcohol and tobacco industries and less quick to place all the blame for "lifestyle diseases" on the individual.

So far, we are probably stating what is obvious to most health educators and other health professionals. Less obvious are the social constraints which abound in the areas that most people would today consider the meat of health promotion programming - nutrition, physical fitness and stress management. These concerns appear to be fairly straightforward and uncontaminated by political contradictions, which may be why they have emerged in the last few years as the "new wave" of topics in health programmes (10). But they contain the same biases and obscure the same issues as do the problems of smoking and alcohol.

Diet and nutrition

When people lift forks to their mouths, it is logical to assume that they have chosen the food that is on the fork. But behind that choice lies the complex schema of the food industry, the ubiquity of junk food advertising, the relative availability of healthy versus refined foods, the unknown risks of food additives and the widespread social phenomenon of fast-food outlets. Most of the food products advertised on television have little or no nutritional value. They are often high in sugar and other products potentially detrimental to health. Studies have clearly shown that a person's ability to differentiate nutritional truth from food industry fantasy is related to both level of education and annual income (11). It should not come as a surprise, for instance, that as the income index rises, the consumption of fresh fruit and vegetables also goes up and consumption of starchy food products goes down. People from wealthier backgrounds are simply more likely to have had post-secondary education than their poorer neighbours and have more opportunity to compare food prices and purchase expensive out-of-season produce.

What may be surprising to most health educators is the fact that 1 657 017 Canadian children are now living in economic situations sufficiently impoverished to cause health problems, many stemming from nutritional deficiencies (12); and that over 27% of the entire Canadian adult population lives at or below the poverty line (13). It would be cynical or grossly self-deceptive not to appreciate the impact of poverty and poor education on nutritional options.

Furthermore, we should never take lightly the fact that eating choices, regardless of a person's income or education level, are constrained by a multi-billion dollar food industry which has profit, and not health or nutrition, as its prime objective. Food processing, of suspect nutritional value, is Canada's largest manufacturing industry, employing over 200 000 workers (14). The food conglomerate is a masterpeice of vertical integration, with megacorporations controlling production from seed stock and farmland to the retail outlet. Dr Cornerly, former president of the American Public Health Association, was probably not overstating the situation when he argued that "primary responsibility for the very poor diet of US citizens lies within the corporate practices of the food conglomerates" (15). Poverty, poor education, junk food mystification, corporate monopolies - these are the basic features of the social context within which most Canadians must make their dietary decisions.

Lack of exercise

Lack of exercise is generally assumed to relate to lack of physical activity in one's leisure time, and health promotion programmes often end up pointing a finger at those "lazy slobs" who come home after a hard day's sedentary work and collapse in front of the television, lacking the willpower to don a jogging suit or go to the racquetball court. But the low level of physical fitness among Canadians is not simply a problem of individuals who do not use their leisure time for physical activity; it is also a feature of all highly industrialized countries which have, within one brief century, all but eliminated physical exertion as part of a person's normal "working" experience.

Farmworkers, for example, have been shown to have approximately 25% of the incidence of coronary heart disease (CHD) as sedentary civil servants (16). Instead of addressing exercise as a leisure time activity alone, health promotion programmes would do well to advocate the inclusion of physical activity into legislated labour standards.

What happens now? The major health promotion programme on fitness to date, for instance, is that of PARTICIPaction. This organization sells its programme to corporations on the basis that it "takes no time out of the workday, requires no special facilities or equipment, no organized exercise component, and can be administered by any staff person" (17).

Yet, since it is the job structure that has rendered most persons physically inactive during some 50% of their waking lives, is it not reasonable to suggest that the job structure has some responsibility for recreating some opportunity for that activity? Regular exercise drills and gym breaks could become part of the paid workday of all employees, allowing employers an opportunity to "earn" some of the financial rewards which purportedly come from having fit employees. Fitness centres could become part of the mandatory building standards for the construction of any new office complex or manufacturing plant.

The dominating middle-class bias of health promotion programming (its "blind eye" turned to the various economic, sexual and cultural burdens which are unequally distributed among the Canadian population) is apparent in fitness promotion. For example, it is implied that all persons should jog (even if jogging shoes are expensive) or swim (even if the cost of using directly or indirectly state-funded aquatic facilities are beyond the budget of those on low income) or hike on weekends (even if large numbers of people, especially single mothers, have difficulty affording transport out of the city, let alone appropriate hiking gear).

Again the sexual asymmetry in our society works against women's ability to take part in any regular exercise programmes. Women still have primary responsibility for children. Even when women work outside the home (18), they still retain the major responsibility for home and child care as well (9). Their positions, when they do work, are almost always in the lowest paid section of the economy, and therefore they often have little more than a rushed half-hour lunch break. Finally, women usually lack control over family income, which can impair even moderate attempts to purchase the time (for example, for babysitter fees) and equipment necessary to maintain a minimal fitness programme.

Stress management

Stress management and psychosomatic/behavioural medicine have become a recent focus of health promotion programmes, perhaps owing to the now undisputed correlation between stress and CHD, the major killer in our "affluent" society. Such programmes, however, still operate from a lifestyle concern with individual behaviour options. Yet, significantly, a 1971 US Health, Education and Welfare study found that:

> ... the strongest predictor of longevity was work satisfaction. The second best predictor was overall "happiness" ... Other factors are undoubtedly important - diet, exercise, medical care and genetic inheritance. But research findings suggest that these factors may account for about 25% of the risk factors in heart disease, the major cause of death. It appears that work role, work conditions and other social factors may contribute heavily to this unexplained 75% of risk factors (19).

Despite the common stereotype of the stressed executive who is thought to be most prone to heart disease (and most in need of stress management courses and plentiful recreation) the reverse is actually the case. The incidence of CHD increases as one goes down the corporate ladder, with blue-collar workers suffering almost four times the incidence of CHD as executives (20).

We have already argued that a person's ability to achieve fitness is related to economic, sexual and cultural impediments. The opportunity to enjoy leisure activities and to seek relief from stress is also linked to one's ability to pay for it, with lower paid workers having much less access to recreation than the higher-salaried élite. To this can be added work-dependent stresses in family life which only low-echelon, low-income workers face, such as financial difficulties, fear of unemployment, lack of pension security, mechanization of jobs, and so on.

Perhaps an even more pervasive factor in the differing CHD rates is the psychological conditioning that workers experience. Workers on the lower rungs must generally follow orders. Their tasks are routine, leaving little time for personal input other than a particular skill mechanically applied. Even more devastating is their knowledge that they are, inevitably, only as indispensable as their willingness to comply swiftly with the orders of their superiors in the workplace. This contrasts sharply with the executive who is often rewarded for the very things that are cause for a lower-ranking worker's dismissal: individual initiative, self-directed work, personal choice in work strategy and so on. It is easy to ascertain why low-echelon employees might be less inclined to *choose* alternatives to their stressful conditions than their high status counterparts. Apart from the economic and time barriers that intrude upon their lives, their very work experiences continually reinforce the benefits of *not* making a personal choice!

Shifting the philosophy: social responsibility

The above examples point out that we should be wary about jumping on any promotional bandwagon that defines social problems (health or otherwise) as primarily individual in both origin and resolution.

Furthermore, it is worth noting again that the various "risk categories" of health promotion programmes contain the tacit, pervasive assumption that health and disease are wholly individual phenomena. We suggest an alternative definition. Disease is something which individuals experience but its origin is less a function of individual processes (lifestyles, congenital weaknesses and so on) than it is a result of social structures and situations. The critical element in our definition is the word "social". No longer should health problems be seen as individual risk consequences requiring individual behaviour changes. Instead, health and its obverse, disease, should be understood as complex, highly conditioned social phenomena which demand social change through collective forms of action.

Collective action is really no more than an amalgam of the action of individuals who realize that their health problems share the same social context and thus are best resolved via group activities. Group activities provide opportunity for mutual support, peer criticism, self-help and education, dialogue for critical analysis, and the sheer power of numbers necessary to create a political impact - features all notably absent from the individualized approach of current health promotion programmes. We will discuss later how health education can be transformed to become such a group process.

So far, we have argued that even within the domain of health behaviours which are clearly personal in nature, the primacy of social context cannot be ignored. It is now important to extend this argument to include the vast realm of socioeconomic and environmental disease in which "personal choice" plays little role except as an apology for industrial, medical, social and governmental irresponsibilities.

Economic inequality

When one of the authors sought specific data from Statistics Canada on the relationship between income and health, she was informed that "we lack the data you seek" (21). Similarly, the compilation of health-related data, Health field indicators (22), contained no information on health status as it pertained to income, social class, occupation, etc. The fact that such information is not included in data gathering makes it apparent that social class and income are not perceived to be significant variables in relation to health, and renders it difficult to refute that perception.

There are, none the less, some data sources (many of them American) which indicate the primacy of income level as a predictor of health.

- Death rates in cities are 50% to 100% higher in poverty neighbourhoods (23).

- Low-income families are four and a half times more likely to report poor health than are upper income families (23).

- There is a positive relationship between poor health in children and poverty (24,25,2).

- Low-income groups demonstrate far greater disease-inducing lifestyles than do upper-income groups (26). This corresponds to the fact that "underutilizers of health services tend to suffer from a broad array of social inequality" (27) and reflects the middle-class orientation and assumptions of such programmes.

- Infant mortality (often used as a prime indicator of the general health of a population) is positively correlated to low income (28). The same study found that death from all causes was correlated to poverty.

- Hypertension (a risk factor in heart and kidney disease, stroke and other cardiovascular diseases and death) is twice as prevalent in poor groups as in upper-income groups (29).
- There is a positive correlation between lower social class/income and increased incidence of mental disease (30,31).
- Perinatal morbidity and mortality rates in Canada are higher in provinces where the income levels are lower (32).
- In British Columbia, the perinatal death rate is almost twice as high among Indians as among non-Indians. The most glaring difference between the two groups is the relative degree of poverty (33).

Sexual inequality

To the extent that people are poor, they will be afflicted with economic barriers to good health. Poverty amongst women is more pronounced than it is amongst men. Women comprise 60% of the adult Canadian population living in poverty (34). And this situation is even more stark when women are the sole income earners. Women are over three times more likely to be poor when living alone than when living with a man, and families with female heads of household are five times more likely to be low income than families with male heads (35). The cliché that any woman is simply one man away from welfare is disturbingly true.

But there are other factors, as well, that render sexual inequality a grave health risk.

- Almost half of all American women are, at some time or another, prescribed mood-modifying drugs - more than twice the number of men (36).
- Seventy per cent of habitual users of minor tranquilizers and 72% of antidepressant users are women (36).
- In Canada, over two thirds of psychotropic drugs are prescribed to women, and from 15% to 20% of women at any given time are taking mood-modifying medication (37).
- Averaging over the period 1971-1977, Canadian women constituted 65%, 69% and 70% respectively of those persons suffering adverse health-endangering reactions to analgesics/antipyretics, sedatives/hypnotics and psychotherapeutics (38).

There is ample evidence that this sexually differential treatment of women by the medical system is related to sexist assumptions about women's social role, the patriarchal myths of women's health and medical problems that doctors receive during their training, and the reinforcement of such assumptions via pharmaceutical advertising which tends to "suggest strongly that inability to function in a traditional female role, inability to cope with being a woman and with woman's tasks, need to be treated with medication" (39).

Sexual inequality and patriarchal attitudes have also created health risks for women in such areas as contraception. The "pill", for instance, was introduced to the market after a paltry five years of research which is now considered to be of dubious ethical, methodological and scientific credibility (36,2). According to one prominent researcher, the continuing use of oral contraception constitutes "the greatest human guinea pig experiment in history" (40).

There has also been the tragedy of thalidomide, the scourge of which some critics fear has been resurrected with Bendectin (41). The known carcinogens, DES (diethylstilbestrol), continues to be used by medical practitioners and health clinics across North America as a morning-after pill. Obstetrics and gynaecology remain highly medicalized under male control (42), and nurse-midwifery is still posed by some health professionals as a threat to mothers (43) despite extensive documentation to the contrary (44-46). The degree to which conditioned male attitudes and values imposed risks to female patients prompted one writer to recommend that "male medical students be barred from obstetrics and gynaecology" (47).

Occupational hazards

Arnold Miller, as president of the United Mine Workers of America, once cried out that, "Occupational disease infests this nation like a plague" (48). Consider the following "grisly litany".

- 1 036 000 Canadian workers were injured on the job in 1977, with a mortality exceeding 900 and a morbidity in excess of 500 000 (49). These figures are considered conservative due to the numerous "industrial hazards that do not strike as swiftly but which are just as crippling and as deadly (and because they are) based only on those injuries that are covered by and reported to workmen's compensation" (49).
- In the United States, over 128 000 workers die each year in work-related accidents or from occupationally induced diseases (50,51).
- Over 50 000 deaths per year in North America are caused by asbestos-related cancers (52).
- Thousands of new industrial chemicals are discovered each year. Few, if any, receive adequate testing for possible health risks to those workers who must handle them. Even fewer are placed under any kind of restriction. And even when these restrictions exist, they have usually been shown to be ineffective in adequately protecting workers from damaging health consequences (53).

The worker is often immobilized to individually alter these hazardous conditions. Most workers are still non-unionized and face possible dismissal for complaints related to occupational health, especially when such complaints would require major alterations to working conditions.

Tens of thousands of Canadian workers enter plants to the deafening sound of clanging machinery and breathe air full of potentially toxic pollutants, all the while handling substances of which they are told little and about which still less is known. As health educators, we would do well to meditate on the impact which our politely wrist-slapping messages on tobacco and alcohol and our buoyant exhortations to run, jump and be fit could conceivably have when placed alongside the daily experiences of most industrial workers.

Environmental risks

Dr Samuel Epstein, formerly of the US Environmental Protection Agency, recently published a 628-page exhaustively detailed study on cancer in the United States (54). He concluded that "environmental factors cause from

70 to 90% of all cancers" and that "the recent increase in the incidence of cancer is due to industrial pollution" (55). He is tough on the relationship between tobacco and lung cancer but, unlike most health promotion programmes, he also plunges fearlessly into the much more awesome and pathogenic arena of industrialized carcinogenic risks.

Health promotion programmes that emphasize the damaging effects of cigarette smoking are still valid. But they address only the tip of the cancer iceberg, and their silence on the grave health risks of environmental pollutants (which are clearly *not* a matter of consumer personal choice) must be challenged. Evidence continually piles up indicating that, before this millenium closes, the industrial toxification of the environment may well be the most life-threatening "disease" in this planet's history.

There are other environmental health hazards as well:

- polluted drinking water, with undetermined health risks;
- polluted air, leading to a variety of respiratory ailments;
- weakened ozone layer, increasing the risk of skin cancer;
- acid rain, threatening crop production in both Canada and the United States;
- polluted oceans, decreasing the fish and seafood stocks;
- carcinogenic fertilizers and food additives, polluting the entire food chain.

These are critical health issues. Like all the other social pathogens, they are embedded in the very structure of our industrial society, and they cannot be corrected without a widespread social commitment to radical changes in how we function as a society. We feel that it is imperative for health promotion in the 1980s to begin addressing the reality of these social pathogens, rather than remaining stuck on a health/disease analysis that defines sickness as a matter of personal indiscretion. The sociopolitical reality of illness and health is one that every woman, every poor person, every worker in a factory, every individual who lives in a smoggy city or near an industrial plant or a polluted river experiences on a daily basis. Our continued silence on this reality will render us an anachronism at best, destined to hold more conferences at which we will continue to ask ourselves, "Why don't our programmes *really* work?". At worst, we will find ourselves accomplices in what could be called one of the major mass-deceptions in history.

The challenge: education for critical consciousness

The above are strong, harsh indictments. We are convinced they must be made. At the same time, we do not feel that pointing an accusing finger at health professionals is any more productive than holding the Canadian public personally accountable for their unhealthy lifestyles. We conclude, then, with a few suggestions on how health educators/promoters can face the challenge we have placed before them.

The first step in meeting this challenge must be a redefinition of individual responsibility. We must expand it so that it holds people accountable not only for their individual health behaviours but also for those behaviours which might induce poor health in others. Thus, the corporate board and shareholders of a belching industrial plant must accept responsibility for the respiratory infections of people living downwind of the stacks, just as smokers are now held responsible for polluting their own lungs. Similarly, we must link our messages on the personal health choices that individuals can realistically make to the social choices which people collectively must tackle. Such a process would entail:

(a) reflecting upon aspects of reality (e.g. problems of poor health, housing, etc.);

(b) looking behind these immediate problems to their root causes;

(c) examining the implications and consequences of these issues, and finally

(d) developing a plan of action to deal with the problems collectively identified (56).

The result of designing programmes in this fashion is a public which possesses a critical consciousness, a public that is able to reflect critically on its full environment in a way that unifies experiences rather than isolating them into discrete fragmentary entities. Current health promotion programmes focus exclusively on the narrow band of personal health behaviour and disconnect individual health from its social context. Likewise, social problems such as poverty and pollution are perceived as topical political issues disconnected from personal health. The priority of health promotion programmes in the 1980s must be to unify these two poles so that individual responsibility becomes synonymous with social responsibility. Health promotion programmes would then include collective actions to alter the health-damaging aspects of our social environment as well as individual action to alter personally damaging habits.

The role of the health educator/promoter must also be radically transformed. We must get off our noble professional pedestals from which we try to determine better ways to make people healthy. Effective learning comes from action in the world, not from passively consuming mass media messages or lectures of wisdom from a professional élite. Effective education and promotion is non-hierarchical. In other words, we must cease working *for* other people (that is, we must stop searching for ways to "motivate" them) and start working *with* people. Their struggle to lead healthy lives is also our struggle; we have a responsibility to *respond* to their needs rather than *determine* them.

As health professionals we have had the privilege of education and experience in health that few other Canadians enjoy. We must share that privilege in such a way that people rediscover their personal and collective power, and reassume control over their own health through a critical awareness of the social, economic and sexist conditions that have largely engendered poor health in the first place.

This does not mean that we cease our present activities. It does mean that our priorities must be altered to include all the socially induced risks alongside those which are currently defined as lifestyle risks.

This article has indicated several hitherto ignored areas which must be addressed.

If we always keep in mind that people *desire* to be healthy rather than ill, that this desire is thwarted by complex social power structures and relationships, and that our role should be one of working *with* people to confront the social and personal paradoxes of their lives, then health education and promotion may yet become an important and effective practice, and we may yet make substantial leaps forward in our goal of ensuring the health of all Canadians.

REFERENCES AND NOTES

1. Canadian public health association policy statements (health promotion). Canadian journal of public health, 65(2): 140 (1974).
2. Epstein, S. The politics of cancer. New York, Anchor Books, 1979, pp. 152-154.
   Not surprisingly, tobacco companies are now trying to create new markets in the Third World by manufacturing and selling cigarettes that are three to five times as potent as the brands now being marketed in North America. Thus, even if the entire Canadian and United States population became non-smokers, the industry would continue unabated and the moral question of permitting a clearly pathogenic business practice would remain.
3. The money-making aspect of the current fitness fad reflects a problem basic to health promotion programmes: a middle-class bias that regards all individuals as being reasonably affluent. Promotion programmes on fitness designed by professionals are unfortunately best heeded by professionals.
4. It is worth questioning why the maintenance and promotion of health, which for centuries were the responsibility of mothers, families and the general community, have been usurped by a cadre of professionals over the past 30 years.
5. Curiously, most health economists do not believe that the dollars of the "preventive ounce" will obtain any cost savings in the "pounds of cure". The authors view health promotion ideology and its touted cost-savings as an adaptive measure taken by governments in the midst of fiscal crisis to justify containing (perhaps even decreasing) the budget-breaking, non-capital-generating social and health services. By spending minimal amounts on high profile campaigns addressing individual responsibilities for poor health, the government has provided a rationale for cutting back on its service costs. In this manner, health promotion ideology is parallel in function to the no-frills core-curriculum movement in education and the "culture of poverty" ideology in the welfare system.
6. Freire, P. Education for critical consciousness. New York, Continuum Publishing, 1980, p.8.
   "A 'massified' society is one in which the people ... have been manipulated by the élite into an unthinking manageable agglomeration."
7. Lalonde, M. A new perspective on the health of Canadians. Ottawa, National Health and Welfare, 1974.
8. Ibid., p.16.
   Lalonde's document is not alone in creating the concept of self-imposed risks. Both the United States and the United Kingdom have produced similar tomes which define health problems within this narrow, individualistic frame of reference. These are: Healthy people: The Surgeon General's report on health promotion and disease prevention, Washington, DC, US Department of Health, Education and Welfare, 1979; and Prevention and health: everybody's business, London, Department of Health and Social Services, 1976.

9. Meissner, M. et al. No exit for wives: sexual division of labour and the cumulation of household demands. *Review of Canadian sociology and anthropology*, *12*: 424-439 (1975).
10. They became, for instance, the primary foci of the conference on "The shifting medical paradigm: from disease prevention to health promotion", co-sponsored by the Pacific Region of the Health Promotion Directorate, National Health and Welfare, the British Columbia Ministry of Health, and the Vancouver City Health Department. It was held on 20-21 March 1980, in Vancouver.
11. Bureau of Nutritional Sciences. *Nutrition and health in Canada*. Ottawa, National Health and Welfare, 1979 (Occasional paper no. 5, p. 40).
12. National Council of Welfare. *Poor kids, a report on children in poverty in Canada*. Ottawa, National Council of Welfare, 1975, p. 41.
13. *Income distribution by size in Canada*, (13-207). Ottawa, Statistics Canada, 1978, Table 64, p. 103.
14. *Nutrition and health in Canada*, p. 56 (see ref. 11).
15. Navarro, V. *Medicine under capitalism*. New York, Prodist, 1976, p. 127.
16. Montgomery, D. Physical activity and coronary heart disease. *Prevention review*, *2*(3): 2 (1980).
17. PARTICIPaction, *Fitness: the facts*. Toronto, PARTICIPaction promotion kit, 1980.
18. Statistics Canada. *Canada's female labour force*, (98-804E). Ottawa, 1980. Sixty-two per cent of all women in the labour force are married. Forty-four per cent of all married women work.
19. US Department of Health, Education and Welfare. *Work in America, report of a special task force to the Secretary of Health, Education and Welfare*. Cambridge, MA, MIT Press, 1971.
20. Hinkle, L.E. et al. Occupation, education and coronary heart disease. *In*: Sechrist, W. & Hart, E., ed. *Dynamics of wellness*. Belmont, CA, Wadsworth Publishing, 1970.
21. Personal correspondence with John Davis, Assistant Director, Health Division, Statistics Canada, 22 August 1980.
22. Ouellet, B. *Health field indicators*. Ottawa, National Health and Welfare, 1979.
23. US Public Health Service. *Selected vital and health statistics in poverty and non-poverty areas of 19 large cities*, Series 21, no. 26, 1975, p.7.
24. Davie, R. et al. *From birth to seven: report of the national child development study*. London, Longman, 1972.
25. Joint commission on the mental health of children. *Crisis in child development*. New York, Harper and Row, 1970.
26. Holtzman, N. Prevention, rhetoric and reality. *International journal of health services*, *9*(1): 32 (1979).
27. Scott-Samuel, A. Why don't they want our health services? *Lancet*, *1*(8165): 412-413 (1980).
28. Chapman, J.M. & Coulson, A. Community diagnosis: an analysis of indicators of health and disease in a metropolitan area. *International journal of epidemiology*, *1*: 75-81 (1972).
29. Eyer, J. Hypertension as a disease of modern society. *International journal of health services*, *5*(4): 539-558 (1955).
30. Turner, R.J. Jobs and schizophrenia. *Social policy*, *8*(1), (1977).
31. Liem, R. & Liem, J. Social class and mental illness reconsidered. *Journal of health and social behaviour*, *19*(2): 139-156 (1978).
32. Statistics Canada. *Vital statistics*, III(84-206): Table 4. Ottawa, 1976.
33. National Health and Welfare, Medical Services Branch. *Annual report of the medical services branch, Pacific region*. Ottawa, National Health and Welfare, 1979.
34. National Council of Welfare. *Women and poverty*. Ottawa, 1979, p.7.
35. *Ibid.*, p.14.

36. Corea, G. The hidden malpractice. New York, Jove Publications, 1979, p. 92.
37. Stephenson, S. & Walker, G. Psychotropic drugs and women. Bioethics quarterly, 2(1): 20-38 (1980).
38. Statistics Canada. Perspectives Canada III. Ottawa, 1980, Table 3.17, p.58.
39. Seidenberg, R. Images of health, illness and women in drug advertising. Journal of drug issues, 4(2): 264-273 (1974).
40. Epstein, S. The politics of cancer, p. 238. (See ref. 2).
41. Dowie, M. & Marshall, C. The Bendectin cover-up. Mother Jones, November 1980.
42. Scully, D. Men who control women's health. Boston, MA, Houghton Mifflin, 1980.
43. Mandeville, A.F. Parapros threaten care. British Columbia medical journal, 22(9): 397 (1980).
44. Corea, G. The hidden malpractice, Chapters 11 & 12. (See ref. 36).
45. Johns Hopkins University. Traditional midwives and family planning. Population reports, Series J, no. 22, 8(3): 439-488 (1980).
46. Ehrenreich, B. & English, D. Witches, midwives and nurses. London, Billings and Sons, 1973.
47. Seaman, B. quoted in: Corea, G. The hidden malpractice, p. 14. (See ref. 36).
48. Miller, A. The wages of neglect: death and disease in the American work place. American journal of public health, 65(11): 1217-1220 (1975).
49. Brusegard, D. Health. Perspectives Canada III. Ottawa, Statistics Canada, 1980, p. 48.
50. Discher, D.P. et al. Pilot study for the development of an occupational disease surveillance method. National Institute for Occupational Safety and Health, US Department of Health, Education and Welfare, US Government Printing Office, Washington, DC, 1975, pp. 75-162.
51. Gordon, J.B. et al. Industrial safety statistics: a reexamination: a critical report prepared for the US Department of Labour. New York, Praeger Publishers, 1971.
52. Epstein, S. The politics of cancer. New York, Anchor Books, 1979, p. 80.
53. Ibid., pp. 76-125.
54. Ibid.
55. Ibid., p. 17.
56. Minkler, M. & Cox, K. Creating critical consciousness in health. International journal of health services, 10(2): 311-322 (1980).

SOUNDING BOARD
HEALTH EDUCATION: PANACEA, PERNICIOUS OR POINTLESS?

by
Ellen J. Cohen & Carl I. Cohen

Introduction

As a consequence of the frustrations spawned by the escalating costs and the low returns of disease-oriented medicine, health education has begun to be touted as an antidote to the nation's health ills.

At the federal level, interest in health education was aroused as early as 1971 with the appointment of the prestigious President's Committee on Health Education (1). Subsequent activities at the executive and congressional levels culminated in the enactment of the National Consumer Health Information and Health Promotion Act of 1976. This law established within HEW a high-level Office of Health Information and Health Promotion. It also directed the Secretary of HEW to undertake activities to expand the use and application of health education. It has been conservatively estimated that over the initial three-year period this act will add at least $70 million to federal expenditures for health education (2).

At nongovernmental levels, several powerful organizations such as Blue Cross, the American Hospital Association and the Association of American Medical Colleges have placed health education among their priority items (1). Furthermore, prestigious journals (e.g. Science) have devoted editorial space to the advocates of health education (3).

Because experience has taught us tobe wary of new health ideologies (cf. community mental health in the 1960s), it is imperative that the recent promotion of health education receive careful scrutiny. Before embarking upon costly federal programmes, we must critically determine whether health education is capable of both reducing health costs and fostering better health.

Empirical data

Despite recent extensive health educational campaigns to alter American smoking, driving, leisure, eating and drug habits, none have produced any notable successes (4). The millions of dollars spent on antismoking campaigns tend to refute the claim that inadequate funding is primarily responsible for these failures (2).

Since a wide discrepancy exists between health knowledge/attitudes and health actions (5), even the campaigns that have been ostensibly successful have been unable to substantiate their assertions with hard data. For example, although "100 000" doctors have stopped smoking, this trend has not been paralleled by other health workers. It is equally plausible to conclude that it was not an educational campaign but a multitude of factors (e.g. concern over "image") that were responsible for the physicians' behavioural change.

Haggerty (6) observed that a careful review of the literature leaves one with only a few studies meeting two criteria; that alterations in behaviour rather than knowledge or attitudes should be the end result of intervention; and that rigorous research methods with controls or at least good comparisons should be used. Haggerty argued that "when such rigorous criteria are used, few health education programmes have shown much effect on behaviour".

Our own analysis of all empirical studies reported in 11 major health education journals during the three-year period 1975-1977 indicated that two fifths of the studies had inadequate designs, one fifth yielded insignificant results, and one third showed statistically significant results but only minimal improvements (i.e. although the experimental group differed from the control, the resultant scores were below the 75% levels of desired cognition, attitude or behaviour). Only 7% demonstrated statistically significant results with major improvements (7).

Other excellent reviews by Berberian et. al (8), Green (9), Hosay (2) and Young (10) have similarly presented a rather bleak picture of health education's ability to alter behaviour meaningfully.

In the United States, the best known "successful" health education project is the Stanford Heart Disease Prevention Programme (11). This study aimed to determine whether community health education could reduce the risk of cardiovascular disease. The researchers reported a "substantial" decrease in risk factors in the target communities, thus suggesting that educational campaigns "may be very effective in reducing the risk of cardiovascular disease". However, analysis of the raw data indicates that for nearly all the variables, there were only slight differences between control and experimental groups. Owing to large sample sizes, minimal changes tended to result in "statistically significant differences". For instance, one of the experimental groups showed a 13.7% decrease in daily cigarette consumption as opposed to a 2.5% decrease in the control group (significant at the 0.05 level). Nevertheless, this difference merely meant that smokers in the experimental population had a daily cigarette consumption at base line and after two years of 22 and 20 respectively. The control group averaged 23 cigarettes per day after two years.

Health education has shown some promise in the area of patient education. But most successes generally have been achieved in situations in which patients had procedures clarified (12) or were taught self-administration techniques - e.g. diabetes, haemophilia or chronic renal disease (13,14). Patient education has been less successful in altering habits and lifestyles (2). Health education combined with clinicalservices has also produced more sanguine results (15). However, no attempt has been made to separate the effects of additional treatment from educational influences.

Although the exponents of health education readily acknowledge the need for more carefully controlled studies, they nevertheless maintain that there is already "significant evidence" that educational programmes can reduce health costs (16). Another common rejoinder has beento argue that there will never be a time when "all the data are in", since the context of society is constantly in flux (1). It therefore follows that funding must be committed in advance of any definitive conclusions regarding health education - if such a state is ever attainable.

It is our contention that the inability of health education to alter behaviour appreciably does not stem from the "primitive state of the art", but rather from contradictions inherent in the concept of health education as it exists in our society.

Philosophical issues

Although there are a multitude of definitions of "health education", it has been suggested that they are united by their common concern with prevention of illness and their emphasis on influencing individual behaviour (1). The NIH/American College of Preventive Medicine Task Force, comprising leaders from public and private sectors, reached "total agreement" that "factors of individual behaviour and lifestyle play a major role in health, illness, disability, and premature death". They further maintained that the justification for health education depended "on the conviction that good health demands individual knowledge, individual responsibility, and individual participation ... "(1).

It is this emphasis on the individual that is the hallmark of the health education philosophy. Even when the necessity for environmental change is recognized, modification is interpreted as vis-à-vis the individual: "Any behaviour change must include efforts to arrange the mechanical or environmental situation so that individuals who are led to change their behaviour can actually do so" (17).

Advocates of the health education ethos claim historical precedence: "Throughout recorded history, responsibility for health was placed on the individual" (1). However, historical evidence contradicts this claim. The Homeric view of illness saw disease originating externally - i.e. caused by deities (18). The Hippocratic concept of illness likewise recognized that "the wellbeing of man is influenced by all environmental factors ... " (19). Only in the last hundred years has the individualistic-mechanistic notion of disease been pre-eminent (20). (This ideology views pathology as primarily individual and sees therapy as individual-oriented.) The victory of this paradigm helped absolve an oppressive mid-19th century industrial world of any responsibility for disease. Hence, if a worker became ill, he would blame a microorganism or his body's mechanical failure rather than existing economic or political institutions.

Returning to the present, the contradictions of the individualistic solution can be best comprehended by examination of empirical evidence regarding the pathophysiology of illness. Studies by Holmes and Rahe have demonstrated that scoring excessively high on a life-events chart can produce nearly a tenfold increase in the chances that a serious health problem will develop (21). The highese scoring life events are categories that involve major disjunctures in a person's social network. Similarly, actuarial studies of adults 45 years of age and above have revealed that mortality rates among the widowed and divorced are twice those of married persons (22). It has been proposed that stresses resulting from disruptions in personal ties account for increased levels of disease (23). In a society characterized by frequent moves, shifting jobs, economic recessions and the like, most individuals will sporadically experience important social disruptions. Furthermore, it is probable that many of our unhealthy lifestyles (e.g. drinking and smoking) offer relief from the attendant stresses.

Alternately, if we examine the four principal causes of mortality - circulatory system disease; neoplasms; accidents, poisonings and violence; respiratory disease - there is substantial support for a major environmental component in their pathogenesis. For heart disease, it has been observed that the strongest predictor of longevity is work satisfaction; the second best predictor is overall "happiness". Other factors (e.g. diet, exercise, genetics and medical care) only account for about 25% of the risk factors (24). There is also accumulating evidence that a vast majority of cancer and respiratory disease are determined by environmental conditions (25). It has long been known that suicides and murders correlate with socioeconomic conditions (26). How is it possible to reconcile these social, political and economic etiological factors with the health educators' contention that alterations in lifestyles can appreciably improve health?

Individualistic solutions place peoplein double-bind situations. For example, the Type A, hard driving, competitive personality has been associated with higher rates of heart disease (27). Yet it is this kind of lifestyle that is encouraged and rewarded in our society. Assuming that one could readily adopt an alternative lifestyle, this new way of living (which is antithetical to the popular mode) would inevitably result in increased job frustrations, insecurity, financial hardships, and a whole new set of stresses. In either case the system is still present; a change in lifestyle does not make it vanish.

Conclusions

Health education per se is not without merit. For some highly motivated groups it may be quite valuable. However, when it becomes the premise of public policy (28), it becomes pernicious. We have presented empirical and philosophical evidence that health education is incapable of fulfilling its promise. Higher health costs and stagnating mortality rates can only be comprehended and solved in the context of the whole society, not on an individual level.

We must begin to recognize that high priced health care reflects the increased industrialization and technologizing of medicine - a trend that parallels developments in other economic sectors. Stagnation of mortality rates similarly reflects the system in its totality. Manifestations of systemic contradictions can be readily observed in Washington, where monies are allocated for preventive dentistry and for heart, lung and cancer research, while simultaneously, countervailing forces create subsidies for sugar and tobacco growers.

Historically, the public health field has never been popular since it has tended to highlight the failings of the system (29). By championing health education, public health practitioners are trading their traditional role for the establishment's imprimatur. However, simplistic, facile, individualistic solutions cannot produce meaningful change. Real changes in health must entail difficult and protracted struggle.

REFERENCES

1. John E. Fogarty International Center for Advanced Study in the Health Sciences. National Institutes of Health. The American College of Preventive Medicine: Preventive medicine USA. New York, Prodist, 1976.
2. Hosay, P.M. The unfulfilled promise of health education. NY Univ. Educ. Q, 8(2): 16-22 (1977).

3. Knowles, J.H. Responsibility for health. *Science*, *198*: 1103 (1977).
4. Cohen, E. *A study of the effects of several education techniques on junior high school students' knowledge and intended behavior toward a new concern in health education* (doctoral dissertation). New York, New York University, 1978.
5. Green, L.W. Should health education abandon attitude change strategies?: perspectives from recent research. *Health education monographs*, *30*: 27-48 (1970).
6. Haggerty, R.J. Changing lifestyles to improve health. *Preventive medicine*, *6*: 276-289 (1977).
7. Cohen, C.I. & Cohen, E. *Health education: panacea, pernicious, or pointless?* Presented at the annual meeting of the American Association for the Advancement of Science, Washington, DC, 1978.
8. Berberian, R.M., et al. The effectiveness of drug education programs: a critical review. *Health education monographs*, *4*: 377-398 (1976).
9. Green, L.W. Status identity and preventive health behavior. *Pacific health educ. rep.*, *1*: 1-130 (1970).
10. Young, M.A.C., & Simmons, J.J. Review of research and studies related to health education practice (1961-66). *Health education monographs*, *23-28*: 1967-1969.
11. Farquhar, J.W. et al. Community education for cardiovascular health. *Lancet*, *1*: 1192-1195 (1977).
12. Egbert, L.D. et al. Reduction of postoperative pain by encouragement and instruction of patients: a study of doctor-patient rapport. *New England journal of medicine*, *270*: 825-827 (1964).
13. Blagg, C.R. et al. Home hemodialysis: six years' experience. *New England journal of medicine*, *283*: 1126-1131 (1970).
14. Levine, P.H. & Britten, A.F.H. Supervised patient-management of hemophilia: a study of 45 patients with hemophilia A and B. *Annals of internal medicine*, *78*: 195-201 (1973).
15. Puska, P. et al. The North Karelia Project: a programme for community control of cardiovascular diseases. *Scandinavian journal of social medicine*, *4*: 57-60 (1976).
16. Roccella, E.J. Potential for reducing health care costs by public patient education: summary of selected studies. *Public health*, *91*: 223-225 (1976).
17. Ubell, E. Health behavior change: a political model. *Preventive medicine*, *221* (1972).
18. Simon, B. & Weiner, H. Models of mind and mental illness in ancient Greece. 1. The Homeric model of mind. *Journal of the history of the behavioral sciences*, *2*: 303-314 (1966).
19. Dubos, R. *Man, medicine and environment*. New York, Praeger, 1968.
20. Navarro, V. Political power, the state, and their implications in medicine. *Rev. Rad. Polit. Econ.*, *9*(1): 61-80 (1977).
21. Holmes, T.H. & Rahe, R.H. The social readjustment rating scale. *Journal of psychosomatic research*, *11*: 213-218 (1967).
22. United States Department of Health, Education and Welfare. *Health in the later years of life*. Washington, DC, Government Printing Office, 1971 (DHEW Publication No. 73-1207).
23. Eyer, J. & Stealing, P. Stress-related mortality and social organization. *Rev. Rad. Polit. Econ.*, *9*(1): 1-44 (1977).
24. *Work in America: report of a special task force to the Secretary of Health, Education and Welfare*. Cambridge, MA, MIT Press, 1973.
25. Cairns, J. The cancer problem. *Sci. Am.*, *233*(5): 64-78 (1975).
26. Henry, F. & Short, J.F. *Suicide and homicide*. Glencoe, IL, The Free Press, 1954.

27. Friedman, M. & Rosenman, R.H. Type A behavior and your heart. New York, Alfred A. Knopf, 1974.

28. Crawford, R. Sickness as sin. Health PAC bulletin, 80: 10-16 (1978).

29. Turshen, M. The political ecology of disease. Rev. Rad. Polit. Econ., 9(1): 45-60 (1977).

ETHICAL DILEMMAS IN WORKPLACE HEALTH PROMOTION[a]

by
John P. Allegrante & Richard P. Sloan

INTRODUCTION

One of the manifestations of the new personal health morality that has emerged in US society during the last decade is the proliferation of workplace programmes designed to promote employee health and help reduce health care costs to organizations. Unacceptably high rates of employee absenteeism, concern about a perceived decline in productivity, and the increasing cost of health insurance premiums paid by US companies have lead business and industry to embrace programmes that promise to help employees prevent health problems now thought to stem, in part, from lack of exercise, poor dietary habits, inability to manage stress, and misuse of alcohol and other drugs. In recent years, many leading US corporations have implemented programmes designed to address such problems.

Workplace health promotion is not without potential misuses, nor should its goals and methods be above ethical scrutiny. The current first-generation efforts to adopt health promotion as a cost-containment strategy pose substantial risks, including ethical problems of social justice, protection of privacy, and social control.

Ethical problems

The dilemma of conflicting loyalties

The first issue that faces professionals in workplace health promotion is the classic dilemma of conflicting loyalties: To whom do professionals responsible for workplace health promotion owe their allegiance and loyalty? To the employer, the employee, or both? Whose advocate does the professional become and under what conditions does the dilemma of conflicting loyalties present itself as an ethical issue? These questions pose potentially perplexing moral dilemmas if the organizational goals and management agenda of the employer are in conflict with the health needs and desires of employees. Consequently, the professional may be caught between the two conflicting interests. For example, as an agent of management, the professional might be expected to develop and implement a stress management programme at the workplace. One, or perhaps both, of two distinct approaches to reducing known stressors or their effects in the work environment could be used. One approach would focus on reducing exposure to the harmful effects of the stressors. The other approach would seek to buffer the effects of the stressors by enabling employees of the organization to develop personal, compensatory coping skills for stress management. The focus of the former intervention approach is organizational in nature, the latter individual behaviour change.

---

[a] This article was published in Preventive medicine, 15, 313-320 (1986).

The dilemma of conflicting loyalties arises when the professional recognizes that the compensatory approach alone - the dominant conceptual approach in workplace stress management programmes (1) - is not likely to solve the problem. This approach does not attempt to remove the deleterious stressors from the work environment. The professional typically takes such an approach because attempting to remove the stressors - for example, assembly line production, sitting most of the day at a work station before a computer terminal and monitor, or working under an overly authoritarian manager - may unacceptably alter the fundamental organizational priorities and economic goals of corporate management. The organizational change approach may threaten the values of authority and productivity held by the employer. However, focusing on the individual as the locus of change may not fully address the health problem. In either case, the professional may risk not only partial failure, but also losing trust and confidence.

What do we do in this situation? How do we balance or reconcile the goals and needs of both the employer and the employee? Can we be responsive to the interest of both? And, perhaps most importantly, in trying to do so, how can we maintain our sense of professional integrity under such circumstances? How we answer each of these questions depends in part on our personal, professional, and political values, as well as on how we perceive the victims of illness.

The dilemma of blaming the victim

What factors influence our selection of the targets of our interventions and strategies? How do we ensure social equity and distributive justice in selecting the targets of intervention and in determining the nature of strategies we use? What is it that accounts for the tendency of most current efforts in workplace health promotion to focus on the individual rather than on the nature of work and the organization itself?

According to Lerner's (2,3) "Just world hypothesis", a prominent theory in social psychology, we tend to perceive the world as a just place in which people get what they deserve and deserve what they get. This applies not only to those people who are the beneficiaries of positive events, but also to those who are victimized by misfortune. The theory holds that we are threatened when confronted by an apparently innocent victim suffering from a misfortune. As a way of protecting ourselves from the possibility that such a thing could happen to us, we seek to reduce this threat either by discovering something that the person did to bring on the misfortune or, failing that, by disparaging the person. Doint the latter serves the function of restoring justice by convincing us that the victim is the kind of person who deserves this fate. In either case, the victim is blamed for the problem.

At least two recent studies (4, 5) have demonstrated empirically that this theory can be extended and applied to matters of health. If people become ill, we tend to attribute the causes of their illness to them and their behaviour (6,7). In this way, at least psychologically, we are protected against the possibility that we will suffer from the same illness. Following this logic, it becomes convenient to target health promotion at individuals rather than organizations, since individuals are seen to be the causes of their illnesses.

Impressive empirical data from several seminal epidemiological studies (8-10) justify, to some extent, the current conceptual focus on individuals. It is now reasonably well established that certain cardiovascular diseases and cancers, for example, are influenced by behavioural risk factors. It is thus appropriate for social policies to emphasize preventive efforts designed to intervene and modify those risk factor behaviours that would improve health status (11,12). However, it is clearly a mistake to believe that factors under the control of an individual are solely responsible for the development of disease. Yet, this is precisely what too many ill conceived workplace health promotion efforts assume.

Minkler (13), has pointed out that, historically, we have implicitly placed the burden of organizing for change on employees and not on the more powerful elements of management, thus blaming the victim for his or her poor health or poor social conditions. As Galanter (14) warned so persuasively in a 1977 editorial that appeared in the Americal journal of public health:

> There is a distressing tendency these days to focus attention on the victims of problems rather than on the problems themselves. Focusing on the victim is easy and convenient. In the first place, something is obviously wrong and it seems necessary to assign responsibility; the victim is particularly vulnerable, helpless, and unlikely to fight back. In the second place, focusing on the victim conveniently diverts attention from other possible causes of the problem, such as conditions of life, work, or housing or the inefficient operations of an institution. The outcome of such misdirected attention thus leads to all-out efforts to change the behaviour of the victims rather than the circumstances responsible for the problem. There are many examples of this tendency ... Workers exposed to carcinogens in the workplace "must" be taught not to smoke so as to reduce their risk; hypertensives who [work] under perpetually stressful conditions "must" be taught to relax.

We do not mean to suggest that individuals have no responsibility whatsoever in the causal nexus of health; such an assertion would be clearly false and irresponsible. However, blame for lung cancer, for example, cannot be assigned exclusively to an individual who is assaulted with persuasive messages from advertisers or who works with known carcinogens on a daily basis. The assignment of responsibility and culpability for illness is a complex matter requiring an understanding of multiple factors. In light of such complexity, the use of behaviour-change strategies must be balanced with enlightened management practices designed to address organizational-level factors contributing to health risk and approaches that foster the empowerment of workers to engage in system-challenging responses.

The dilemma of voluntariness or coercion

A third ethical dilemma in workplace health promotion is that of voluntariness versus coercion. If, as we have suggested, empowerment and system-challenging responses ought to be considered a legitimate goal of workplace health promotion, then the question that arises is whether the professional is ever morally justified in encouraging employees to use coercive strategies to bring about organizational change. And, if so, under what circumstances and to what extent may such strategies be used?

Alinsky (15), Minkler (13) and other advocates of community organization have pointed out that while notions of voluntariness, cooperative action through consensus, and negotiation have become the central and therefore morally preferred tenets of behavioural and organizational change, methods of coercion - including the right to strike, boycotts, and other forms of nonviolent militancy - may be morally justifiable when certain conditions exist. Minkler, for example, has argued that coercive means are justified when a harm-producing situation exists or threatens to exist and where the morally preferred noncoercive change strategies have failed to bring about a compromise or the change necessary to reduce the potentially harmful situation. In such a case, coercive means undertaken by militant workers are morally justifiable because the principles of preventing harm to the community, individual self-determination, and fair opportunity for all take precedence over the principle of protecting management's liberty. This is, of course, the basis on which employees and organized labour justify striking to protest and redress what may be perceived to be unreasonable or unsafe working conditions. One can readily see how this notion could be applied in cases where workers are placed at extraordinary risk, such as in coal mining and in work with known and as-yet-unknown hazardous substances. As McKinly (16) has suggested, the economy of postindustrial US society is, in many ways, actually inconsistent with the promotion of health and prevention of disease, because the work and products of such an economy are often hazardous to health. Until interventions are targeted with a political, economic, and social-change focus, health promotion efforts that focus on the individual to the exclusion of social-structure change will be ill conceived and insufficient as a policy strategy.

The dilemma of unintended consequences

The final ethical issue is the dilemma of unintended consequences. We focus on two nascent manifestations of this dilemma that we believe are important because of the significant implications for public policy.

Emasculating benefits. In September 1983, The New York Times published a front-page story (17) titled: "Major corporations ask workers to pay more of health cost".

While we do not wish to imply that workplace health promotion is causally linked to the emasculation of benefits, it is plausible to assume that when health care costs produce pressure to reduce benefits, the presence of health promotion programmes strengthens the hand of management to undertake such reductions. Rather than providing health insurance benefits, employers - who often piously invoke individual responsibility to their employees while they negate or ignore environmental working conditions - may be leaving the disconcerting impression in organized labour's view that insurance benefits can be easily replaced with worker health promotion programmes. We hope that emasculation of employee medical benefits has not become one of the unintended consequences associated with the development of workplace health promotion. Such programmes were never intended to supplant medical benefits. Ideally, health promotion programmes ought to be used in combination with other cost-containment strategies.

Screening workers. The second potential unintended consequence of workplace health promotion may be considerably more pernicious and insidious. Industry has long had an interest in screening technologies which permit the identification of health problems (e.g. hypertension screening). This undoubtedly has resulted in many lives saved. More recently, technologies to screen for certain genetic predispositions and biological traits have been developed. Industry's interest in such technologies arises from the possibility that they may provide a means by which certain individuals may, in an a priori fashion, be removed from risk through the discovery of traits that increase risk for certain diseases and injury. Associated technological development might focus on the identification of workers who have the potential for difficulty with stress or alcoholism or other behavioural or lifestyle problems (18).

The potential discriminatory character of these technologies is significant. Our concern is that these powerful technologies could be misused or misdirected, perhaps bringing to the workplace a sinister new form of job discrimination and brand of social Darwinism under the guise of health promotion programmes that might be otherwise well intentioned and conceptually sound. In the absence of uniform policies and regulatory guidelines regarding the use of these technologies, such screening could prove to be an odious practice.

Workplace health promotion programmes also employ lifestyle screenings in the form of health risk appraisals which purport to estimate the impact of ones health-related behaviours on likelihood of disease. Although the use of such appraisal as a motivational device has become common practice, Chaves and others (19) have demonstrated that different instruments yield different estimations of cardiovascular risk for individuals with the same health profiles. The possible harmful consequences include either underestimating or overestimating risk. Underestimating risk could lead to inattention to ostensibly life-threatening behaviours, while overestimation could lead to needless preoccupation with one's health. Chaves and his colleagues have raised the question of whether it is ethical to use such estimates, which give the appearance of objective accuracy, when their validity has not been firmly established.

CONCLUSION

The foregoing discussion has provided an interpretation of how several classic ethical issues in social intervention potentially can manifest themselves in health promotion and disease prevention at the workplace. The attendant moral dilemmas these issues may raise, moreover, may leave the professional feeling like a monk in Gomorrah. While health promotion is an important strategy in efforts to improve health and prevent disease, the motives and organizational context for such efforts can render them vulnerable to misuse and critisism.

Expecting workers to assume greater responsibility for their health is undoubtedly necessary if industry is to begin reducing the cost of health care, much of which is passed on to the consumer in the form of higher product costs. This is consistent with the principle and morality of distributing social burdens in an equitable society. We do not wish to impugn the many conceptually sound efforts of well-intentioned companies; however, if management's initiatives to promote worker health are not balanced with sensitivity to issues of equity, justice, and privacy, as well as with spirited attempts to implement organizational changes designed to ensure healthful and safe working conditions, health promotion is likely to be viewed by organized labour as having a cynical ring. The desideratum of efforts in workplace health promotion is that they ought to be beyond encouraging the use of personal compensatory strategies that merely seek to help already predisposed employees make changes in their individual behaviour. Those professionals who are reflective, ethical, and concerned with the social consequences of their work must see that the large conceptual agenda of health promotion is considerably more advocatory than solely teaching employees to assume responsibility for their own personal health by learning and adopting compensatory behaviour that promises to improve health. Perhaps more importantly, the second generation of such efforts also should be concerned with empowering workers and encouraging management to cooperate more fully in the formulation of policies that might prove conducive to health by focusing on the nature of the organization and the work itself.

ACKNOWLEDGMENTS

We express our appreciation to the following for having kindly provided valuable reviews of earlier drafts of the manuscript; Dr Meredith Minkler, University of California at Berkeley; Dr Kelly D. Brownell, University of Pennsylvania School of Medicine; Dr Lawrence W. Green, University of Texas Health Science Center at Houston; and Dr Charles E. Basch and Dr John L. Michela, Teachers College, Columbia University.

REFERENCES

1. McLeroy, K.R. et al. Assessing the effects of health promotion in worksites: a review of the stress program evaluations. Health education Quarterly, 11: 379-401 (1984).
2. Lerner, M.J. Observer's evaluation of a victim: justice, guilt, and veridical perception. J. Personality Soc. Psychol., 20: 127-135 (1971).
3. Lerner, M.J. & Matthews, G. Reactions to suffering of others under conditions of indirect responsibility. J. Personality Soc. Psychol., 5: 319-325 (1967).
4. Gruman, J.C. & Sloan, R.P. Disease as justice: perceptions of the victims of physical illness. Basic applied social psychology, 4: 39-46 (1983).
5. Sloan, R.P. & Gruman, J.C. Beliefs about cancer, heart disease, and their victims. Psychol. rep., 52: 415-424 (1983).
6. Crawford, R. Sickness as sin. Health policy advisory center bulletin, 80: 10-16 (1978).
7. Sontag, S. Illness as metaphor. New York, Vintage Books, 1979.
8. Belloc, N.B. and Breslow, L. Relationship of physical status health and health practices. Preventive medicine, 1: 409-421 (1972).
9. Belloc, N.B. Relationship of health practices and mortality. Preventive medicine, 2: 67-81 (1973).
10. Breslow, L. Prospects for improving health through reducing risk factors. Preventive medicine, 7: 449-458 (1978).
11. Green, L.W. Health promotion policy and the placement of responsibility for personal health care. Family community health, 2: 51-64 (1979).
12. Knowles, J.H., ed. The responsibility of the individual. In: Doing better and feeling worse: health in the United Sates. New York, Norton, 1977, pp. 57-80.
13. Minkler, M. Ethical issues in community organization. Health education monograph, 6: 198-201 (1978).
14. Galanter, R.B. To the victim belong the flaws. American journal of public health, 67: 1025-1026 (1977).
15. Alinsky, S.D. Rules for radicals. New York, Vintage Books, 1971.
16. McKinlay, J.B. A case for refocusing upstream: The political economy of illness. In: Enelow, A.J. & Henderson, J.B., ed. Applying behavioral science to cardiovascular risk Dallas, American Heart Association, 1975, pp. 7-17.

17. Berg, E.N. Major corporations ask workers to pay more of health costs. The New York Times, p. 1, September 12, 1983.
18. Murray, T.H. Warning: screening workers for genetic risk. Hastings Center rep., 13: 5-8 (1983).
19. Chaves, M.A., et al. Cardiovascular risk: differences among health hazard appraisals. In: Proceedings, 20th Annual meeting of the Society for Prospective Medicine. Washington, DC, Society for Prospective Medicine, 1984, pp. 25-27.

HEALTH PROMOTION: A PERSONAL VIEW FROM THE SOUTH[a]

by
Debabar Banerji

This statement provides me with an opportunity to present a Southerner's view of aspects of health and health action in the North. I will make some bare points in order to stimulate discussion.

1. First, an important issue pertaining to the sociology of knowledge: Is Europe talking of health promotion because it is already considered so important in the United States of America? Is it then the turn of the South to join the chorus, as has so often been the case in the past? The danger signals have already been hoisted. Health promotion has already slipped into the deadly embrace of the market in the USA and gained respectability by transforming itself into a $3.5 billion health promotion industry. In the United Kingdom the tobacco industry is offering £3 million for the noble cause of health promotion.

2. The spectacular health achievements in the affluent countries of the North in the form of the conquest of many diseases and the considerable prolongation of life ought to be viewed in their historical context: the convulsive socioeconomic changes of the Industrial Revolution; the condition of the working classes in the nineteenth century; the colonial exploitation and plunder of countries of the South by some of the countries of the North; numerous strifes, conflicts and wars among countries of the North, culminating in the two World Wars; the rise of military-industrial complexes and the arms race and the nuclear terror. People in the South are made to suffer injustices like unequal terms of trade, apartheid, African famines and industrial tragedies (like the Bhopal tragedy) to satisfy the insatiable greed for profits to further increase conspicuous consumption among people in the North.

3. The North can also proudly claim that it has as many as 25 physicians for every 10 000 people. This can, however, be turned round to point out that societies are so sick that they need one physician for every 400 persons. In addition, the conspicuous consumption of medical services claims its own price from the people - iatrogenesis, medicalization, the professionalization of life and the loss of autonomy. A life of conspicuous consumption also generates its own health problems, for example alcoholism, mental health problems and drug addiction. Then there are also the problems of the elderly, of the poor and of the rapidly-rising number of unemployed. Can we call such a condition even the absence of ill health? It is a sickening condition.

---

[a] This article was published in Health promotion, 1(1): 81-82 (1986).

4. Even after cornering the bulk of the natural resources of the planet through the use of brute force, the North has two widely differing cultures - the culture of the gentlemen and the culture of the working class. They differ widely in their health status and in access to resources.

5. As pointed out by McKeown, the health status of people in the North has improved mainly because of socioeconomic changes. There has also been some impact through specific preventive measures and curative practices. But the point is, is the North ready for the type of health promotion proposed? Under the existing conditions, that will be the very antithesis of the historic trends. Can the exponents of health promotion mobilize enough strength to bend the path of history? Can they change the culture of conspicuous consumption? Can they bring about a virtual Cultural Revolution? Or will they also be engulfed by the powerful market forces and end up as apologists of the system, as has happened to the field of health, social sciences and health education? Health promotion has rightly taken note of the vested interests, political, industrial and professional. They arise from a common source - production. Thus the practice of health promotion has also to be a political activity.

6. It would be interesting to find out how far those European countries which have undergone a socialist revolution have succeeded in acquiring what the Alma Ata Declaration terms as social control over medical technology. To what extent have these countries removed the malignant aspects of the technology?

7. The plea for a New Public Health is essentially a plea to go back to Virchow. To promote the cause of a New Public Health it is, therefore, essential to take stock of the political and economic forces which have come in the way of acceptance of Virchow.

8. Experience with the practice of health education also raises some issues of sociology of knowledge. Conceptually, health education is based on humanism, democracy and respect for human dignity. In practice, however, the interplay of market and other forces has led to its degeneration. Authoritarianism, coercion and victim-blaming have become common features. Many health educators have become mere salesmen of the ideas handed down to them by the medical-industrial complex. Unwittingly or otherwise, they have become instruments for legitimising an unjust social order. Their impact is particularly devastating in desperately poor countries of the South. This should serve as a timely warning against those not so well-informed persons who might become fanatic crusaders for health promotion. This crusading spirit is one of the most dangerous aspects of western civilization. When it is mixed with market interests, the consequences are even more devastating.

9. Health promotion acquires a different meaning in the South. In many countries large masses of people are abjectly poor and the ecological conditions are most degrading. They have very high morbidity and mortality rates due to hunger, childhood disorders and communicable diseases. They have been pushed down to degrading levels of existence because of three different forces of oppression. They are oppressed by the native oppressor class; the native oppressors acquire additional power to oppress by aligning themselves with political and business interests of many countries of the North; and, finally, as a reward for help, the businessmen are allowed by the native oppressors opportunities to exploit the masses. The Bhopal tragedy provides a dramatic instance of the three prolonged attacks on the oppressed.

It is virtually impossible not to take sides in a situation like this. If you are not with us, you are against us. The Alma Ata Declaration enjoins WHO and the Members States to take the side of the poor, the dispossessed, the unserved and the underserved. The approach to health and health action has to be basically different in the South. People should not be asked to eat the cake of promotion of positive health when they do not have the bread of relief from the suffering caused by the diseases of poverty and oppression.

A health promotion approach ought to have three major dimensions - political, sociocultural and technological. It is a political struggle against injustice, exploitation and oppression. It is a sociocultural action involving "going to the people" and learning about the ecological and epidemiological conditions, the cultural meaning and cultural perception of issues of health and disease, the perceived need for services, the health practices and health behaviour and the pre-existing cultural norms of coping with various health-related problems. Finally, it is a package of technological action based on an understanding of the political and sociocultural conditions.

Technology is thus subservient to the people, rather than the other way round, as is most often the case. It seems to me this should be the New Public Health, New Health Education and Health Promotion for the oppressed people in the South, as indeed for the oppressed all over the world.

ETHICS AND HEALTH PROMOTION[a]

by
Michel Manciaux, Bernard Pissarro and Elisabeth Zucman

The return to prominence of ethics is recent. Concerns were initially focused upon drug trials, procedures in biomedical research, and on a few practices (e.g. "therapeutic" abortion). However, the range of ethical considerations is expanding at great speed, in part paralleling technical progress, but particularly reflecting the most spectacular applications of that progress. The significance of these applications is exaggerated out of all proportion by the media: there are more important issues from the point of view of health and society.

In most of the industrialized countries, ethical considerations have arisen mainly in respect of progress in human genetics, genetic engineering, techniques of in vitro fertilization, the voluntary interruption of pregnancy, and the use of fetal tissues for research or treatment purposes. Some of these problems are extremely important, even though they affect only a limited number of people: the techniques of fertilization in vitro may, for example, undermine the traditional foundations of the family and parenthood. Other problems, on the other hand, such as the voluntary interruption of pregnancy, affect a great number of individuals and couples and involve conflicts of interest, notably between parents and society.

Trials of new treatments on human beings - and by these are meant all acts carried out for a curative, preventive or diagnostic purpose - call for the imposition of strict conditions, which may moreover vary depending on whether the work is being done with sick people or healthy volunteers (leaving aside the awkward question of control groups). Guarantees of safety, the scientific value of the project, the informed consent of the persons concerned and an acceptable risk/benefit ratio are among the necessary conditions. These precautions are still more necessary in the case of prevention, since a priori the persons concerned are judged to be in good health.

The ethics of disease prevention and health promotion are particularly difficult to confront, involving issues in which personal freedom enters into competition - and sometimes into conflict - with the demands of social life and order; where a balance must always be struck between the rights and duties of individuals and those of groups; where the slide towards the setting of restrictive social norms or towards overweening social control is always to be feared; and where the activities undertaken may have unforeseen and often adverse effects.

Furthermore, it is becoming clear that people's health is very closely linked with their working and living conditions - more often imposed than freeely chosen - and with the lifestyle that they are able to adopt in the context of those conditions, the weight of social pressures and the pull of advertising. There is a delicate problem of balance between the protection which the state and the community owe the citizen against risks which he has little chance of countering by himself (environmental hazards for example) and the promotion of his own health by voluntary personal or community pressures. This calls for a fundamental rethinking of the respective roles of individuals and the various groups with authority and the power of decision.

---

[a] This article was published in Health promotion, 2(1): 1-3 (1987).

It is essential to develop a health promotion ethic which, with a better understanding of the mechanisms and consequences of health promotion activities, should make it possible to determine more precisely the positive aspects as well as the limits and dangers of various types of professional and social behaviour. This is particularly true as regards lifestyles, whether it is a question of adopting lifestyles favourable to health or rejecting those that are detrimental to it. Indeed, the scientific basis for recommendations in this field is often far from solid. One has only to look at the historical evolution, for example, of the advice concerned with bringing up children, with diet or with leading a "healthy life" that has been given during the last few decades. Fashionable child-rearing practices are based on ex-cathedra pronouncements - but without evidence to back them - from "eminent" scientists. What is the ideological significance of the models put forward? On what are they based and what are their repercussions in the way of imitating the cultural attitudes of a dominant class with a consequent loss of cultural identity among the dominated? This occurs just as much between countries as inside a single country.

Few estimates have been made of the possible adverse repercussions and effects of health promotion, including those of a psychological or social nature. Smokers, for example, are increasingly discouraged and made to feel guilty, but the analysis of the psychological, economic, social and political phenomena which lead to smoking is far from being completed, let alone taken into consideration.

In brief, it must be asked whether preference be given to "prolonging life" (something which is easy to measure and can therefore be chalked up as a success), or to "ensuring a full life"? Luckily, the two are not always mutually contradictory. In any case, studies and research are needed on:

- the barriers between knowledge and its application (individual and collective);
- the potentially harmful side effects of health policies and strategies (the risk of attaching labels to people, of victim-blaming, and of social control);
- the reduction of inequities in health and social welfare;
- health promotion through positive education and genuine public participation.

These subjects for study do not, of course, preclude research of the most fundamental nature on the mainsprings of human behaviour and on the prevention of degenerative disease. It goes without saying, however, that ethics also has its contribution to make to neurobiology, neuropharmacology and the neurosciences as a whole.

The relationship between health and environment constitutes a difficult but crucial subject for thought in respect of ethics and health promotion. There is little information, for example, on the cumulative dangers for individuals and groups, in general or depending on their degree of vulnerability, of multiple or repeated exposures to toxic substances, which are not always known to be toxic.

Indeed, the risk-taking behaviour of certain people can be contrasted with the imposition of risks by certain industries, by inadequate town planning, or by advertising. The uncontrolled proliferation of potentially dangerous products, including armaments, in practically all countries, and the conflicts between the need for productivity of industrial firms and the health and safety of their workers are typical examples of risks with which we have not properly come to grips.

Speaking of health promotion brings to mind also the question of health policies and systems. This is where the crucial question arises of inequities between countries, regions, groups and individuals, not only in health but also and above all in access to care.

Research is also necessary into the reasons for resistance to change, looking at the conflicts of interest both among professionals - so numerous and of such diverse kinds nowadays in the health and social sector - and between professionals and the public. This is an immense field for research, but also for ethics, since individual interests (microethics) may well run counter to the rights and demands of society (macroethics).

However, it is perhaps in regard to information that the most ticklish problems arise. The scope of "ethics and information" is not restricted to health information systems and the protection of health data; it also encompasses the information to which users of the health system have a right and the ethic that should govern the relationships, between health specialists and media specialists, as well as the professional practices of the latter.

If they are to manage their own individual and collective health, individuals or groups must have access to existing information. To put it mildly, providing access is not a priority of our societies. The same applies to research: those who are not in the know - in the field of ethics as in research - are often starved of information which might concern them. Knowledge of the resources of the health care system and knowledge of the relevant texts and regulations is not put at the disposal of the citizens, who all too often have no inkling of their rights. Arrangements for communication and discussion scarcely exist. Medical and epidemiological knowledge and the results of research are confined to the pages of treaties or scientific journals, physically and intellectually inaccessible to those who are most concerned or who may even have contributed, as members of a sample, to providing the data on which the research is based. The schools could doubtless play an essential role in teaching the need for a true sharing of knowledge.

However, information also raises the difficult problem of the role of the media, whose relationships with the public and with the health community are, to say the least, equivocal. Without striving to determine who is chiefly to blame, it may be hoped that a code of ethics for journalists can be devised and that health professionals using the mass media should do so without regard to their own advantage and in a style comprehensible to the general public. In this instance medical journalists could play an extremely useful role as communicators, as could national medical information or health education offices bringing together the two professions for the benefit of the public.

These are some of the reflections called forth by the entry of ethics into the new, but potentially very fruitful, field of health promotion. There is still much to be done and if there is a domain in which the "public" should have a word to say (and more than a word) in putting together a social ethic, it is this one. The opportunity must be grasped, but it is essential also to avoid imposing regimentation, reinforcing mechanisms of social control or increasing inequities, all in the name of ethics.

VIII. A PERSPECTIVE ON THE NEW PUBLIC HEALTH

HEALTH PROMOTION - THE MOVE TOWARDS A NEW PUBLIC HEALTH

by
Ilona Kickbusch

> "The stage is set for a new public health revolution"
>
> Lester Breslow, 1985

Introduction

Health For All suggests that we have a choice of futures, and that it is the responsibility of the world's governments to act towards a healthy future. The attainment of better health requires political will and action. It also requires that people constantly reassert their health needs through social movements and wide participation.

The debate on health promotion is an expression of the search for a means to react to major public health challenges such as:

- the problems of survival for a majority of the world population;
- the changing nature of the illness patterns in the developed nations;
- the interlink between health conditions in the North and the South;
- the continuous presence of blatant inequalities in health.

The solutions to many of the world's health problems lie far beyond the means and interventions offered by medicine. The shortcomings of the medical approach are exacerbated by increasing costs and diminishing returns in the industrialized world and slow progress in providing basic medical services in the developing world.

Instead, we need a move towards factors that are basically social and political: an understanding of how health is constituted and the role the people themselves play in defining and maintaining it.

Public health in the 1980s and beyond

The move towards a renewal of public health is an expression of both crisis and opportunity. It reflects the growing implications of new economic realities and the growing consciousness that the development models of the 'sixties and 'seventies have not fulfilled their promise. This crisis is true for both the developed and the developing world - its most brutal effects are on those who are already poor, disadvantaged and oppressed.

The current crisis in public health is usually defined as a crisis of quantity: in many countries public expenditure on health systems has reached a limit that politicians and bureaucrats are no longer willing to accept. Medical care has become the focus of political discussions on levels of public expenditure. But the need to cut and reorganize must be questioned. Again, political answers are more appropriate than arguments from health economics, for at its heart the crisis is political, not economic: blatant inequalities in health status still exist in most countries. The societies which talk most about lack of money and resources are among the richest. They insist that they cannot look after their old and cannot support their citizens. Meanwhile, millions of people the world over are dying of starvation and living in poverty.

The crisis of quantity is being matched by one of quality. Medical care is yielding diminishing returns. It has not lived up to its humanistic promise. It has not reacted adequately to the changes in the illness panorama of the developed world and it is moving with great speed into technological solutions that are of little help to those who are hungry, in chronic pain or in fear of death. Public health is only slowly retracing its ecological and social tradition and trying to redefine its responsibilities in the face of new health problems due to social, economic and environmental hazards.

A more positive future is possible. Social activists towards a more healthy society are to be found the world over in health movements, self-help organizations, among ecologists and in groups of health professionals moving towards primary health care. The new information technology can be used as a tool to reshape the channels and forms of public debate about health policy formation. Our knowledge on the factors influencing health has widened into social epidemiology, self care research, health culture research and research on the interaction between the individual and the social and physical environment. These elements can consciously be brought together to renew public health. However, its starting points will differ in the North and the South. After a period of rapid growth, world inequalities are again coming to the forefront of discussions in crisis form. It needs political will to bring together the tools and the knowledge available for a change in public health. It needs thinking along new lines in order to understand the determinants of the new problems and to grasp opportunities that reach far beyond the health care system.

Health promotion

Health promotion has come to represent a unifying concept for those who recognize the need for integrated public health action at different levels on factors influencing health: economic, environmental, social and personal. The approaches and types of intervention developed in the first public health movement help us to understand the roots and historical patterns that are central to the development of health promotion. The success of the first public health movement was founded on two premises: first, an emphasis on preventive health through collective social action, rather than individualized, creative approaches, and secondly, a political, rather than professional, legitimacy with respect to its values. Three distinct approaches to public health interventions have been developed in the North:

1. Environmental hygiene
   Public health intervention: social and environmental manipulation based on legislative and administrative action such as sanitary engineering, traffic safety, fluoridation.

2. Preventive medicine
   Professional intervention: medical-technical system manipulation such as vaccination, regular health examinations, early diagnosis, screening for specific disorders.

3. Behaviour modification
   Personal intervention: behaviour and lifestyle manipulation in the context of large scale intervention studies or health education campaigns.

In the industrialized world these approaches represent a historical sequence. They reflect a gradual shift of focus from a social and collective approach to an individual responsibility for health.

The first public health movement identified many of the dilemmas of public health today: governments oppose structural changes and prefer remedial approaches, for example; the public is not involved in many public health measures and so opposes them, especially when health measures for the common good are reinforced by the police; laws will override the individual's private rights for public benefit; and prohibiting and controlling social habits is politically sensitive and subject to serious ethical considerations.

The Health For All movement as a public health lobby must be clear about the potential of its approach to health, health care and health policy in a society. The "disease model" with its mechanistic body and world view is still gaining ground the world over, even though many indigenous cultures reflect a much more systemic view of health and illness. Although there is an urgent need for basic health resources such as food and shelter and basic environmental hygiene, the majority of WHO Member States concentrate on the professional and technocratic modes of intervention the medical model has to offer, rather than looking forward and acting on a social public health approach as accepted in the Alma Ata Declaration.

The developing world is confronted by a double jeopardy. Industrialized countries are increasingly exporting unhealthy goods to the poorer parts of the world while at the same time regressing their development. In many instances, medical intervention has preempted both the necessary public health approach and earlier indigenous approaches to health while rapid modernization leads to new problems. This is why in the developing world other starting points for public health have emerged, such as people's own control over health technology.

Health promotion must combine diverse, but complementary, methods or approaches, including communication, education, legislation, fiscal measures, organizational change, community development and spontaneous local activities against health hazards. It is based on three operational strategies: advocacy of health, education for health, and structural change for health.

Health promotion redirects thinking about health:

- by reasserting its social and political aspects;
- by ensuring the people the power to define their own health concerns;
- by placing health more clearly in the context of other aims in life.

As such, it is firmly placed within the Health For All development model that has its focus on enhancing human potential for growth. That is at the core of WHO's goal of a socially and economically productive life.

The ecological and social understanding of health: the conceptual base of health promotion

Public health has always been improved by a timely interaction of social action for health and scientific knowledge about health. A new distribution of health problems North and South calls for both a widened scientific base of public health and a reconsideration of ways to improve it. The stage is set for a new public health revolution.

Health promotion is based on a broad understanding of "health" as the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs; and, on the other hand, to change or cope with the environment. This reaffirms the WHO definition of health, approved by Member States in 1948, reiterating that health goes beyond the absence of disease, but adding a dynamic and process-based dimension. It was rooted in an understanding of public health that encompassed the notion of social responsibility for health. The components of physical and mental well-being needed a foundation in a secure society. It was not until the end of the 1970s - with the Declaration of Alma Ata - that the importance of the social component of the WHO definition of health began to emerge and gain prominence. The understanding of the components of social well-being was developed in the light of current tools and knowledge on social factors in health.

socioeconomic factors and social class differences constitute only the beginning of an in-depth understanding of people's way of life and health. In the light of our present day knowledge we extend social well-being to include components of the social environment such as cultural dynamics and social change, social support, and social relationships. Health promotion as an enabling strategy towards health could provide new tools, strategies and approaches.

An ecological model of health understands the individual as an integral part of a social group and acknowledges the biological as well as the non-biological components of health.

1. Health is a multidimensional phenomenon; the interaction between individuals and their social and physical environment is understood as integrated and wholistic.

2. Health is a process reflecting activity and change with an implicit potential of enhancement, rather than a static endpoint or product. It reflects a pattern of fluctuations, self-transformations and self-transcendence involving crises and transitions. This makes it impossible always to draw clear lines between health and illness. Health and illness are not opposites of a continuum.

But health is more than its components: it is held together by spiritual and emotional notions of well-being, by perceptions of self and one's relationship to others.

If we aim to trace the major elements of an ecological and social model of health we can state:

- It is concerned with the "whole person, mind and body, one of a body, one of a family, and a member of society and culture. The social model recognizes the multiple interactions of these, and emphasizes well-being, fulfilment, independence, functioning in society, and social roles". It is comprehensive and "positive".

- It is concerned with the social distribution of health, for example in relation to income, gender, age, education. It is aware that lifestyles reflect life chances.

- It aims to understand cultural and personal meanings attached to health. For many people, health is not the highest goal in life. Health norms are often in conflict with a more important goal, be it happiness, adventure, or pure necessity. The large variations in health and illness behaviour from one culture to another show how many of the beliefs and behaviours related to health are learned within a specific cultural and social context.

- It takes into account the role of perceptions and emotions related to health. The subjective interpretation of health arises as a central focus of research and action.

- It aims at understanding health actions in the context of patterns of everyday life. People do not live as "smokers", "alcoholics", "disabled", etc. but as whole people. It is a fact of everyday life that people must take risks, especially for people already living in restricted or deprived conditions. Health must not be used as an instrument for controlling social life.

- It implies a non-professional construction of health. It is becoming increasingly clear that health is not just a matter between doctors and patients. It is a total resource. Several decades of research now make it clear that most health maintenance and care is delivered by the people themselves.

- It sees self-reliance as an expression of human dignity and development. Self-care is the first form of care - and all other levels of professional care (also of professional primary health care) are supplementary and supportive.

- It implies that there is more than just one form of caring, curing or healing. In every society, even those most dominated by a medical, professional model of health, we find many different forms of health care provision, and very often we find that the "patients" move between several of these systems. It is important to note the continuous interaction between the three sectors of care, both in relation to knowledge and to technical resources.

This social and ecological concept of health allows us to move one step further in discussing the relationship between primary health care, disease prevention and health promotion. The ecological view does not separate care, prevention and promotion but seeks to develop a dynamic balance between the health system components. Its ultimate goal would not be "perfect health" but health as a resource for everyday life; it is a positive concept emphasizing social and personal resources, as well as physical capacities, rather than risk factors.

New perspectives on health focus particularly on the interaction between people - as individuals or groups - and their social and physical environment and the impact of this interaction on health and well-being. The social environment encompasses economic, political and cultural systems that pattern the general lifestyle of a society and the life chances of particular groups within it. The physical environment encompasses both the natural and built environment, both of which are shaped to a greater or lesser extent by the way of life of the people living in them. The message for health promotion and health education is that integrated strategies for prevention and intervention must be developed - strategies which link up the various social sectors and are also effective within them, and strategies which take account of the health impacts of interactions between people and their physical environment.

This ecological understanding of health which clearly places the individual within a social, cultural and physical environment is the central conceptual base for health promotion. While the risk-factor _prevention approach_ aims to establish _causal relationships_ between isolated factors and behaviours, the ecological _promotion approach_ aims to identify _patterns of interaction_ between biological, personal and environmental factors. It aims at unspecific enabling intervention based on the common life situations of certain groups, rather than on intervention aimed at specific diseases. The analysis of health therefore becomes concerned with a complexity of causes and outcomes and aims at tracing their interaction. The patterns evolving from the interaction between the structural and the personal can be called "health cultures".

Health cultures

Approaching the person-environment interaction in cultural terms allows us to understand how individuals structure reality, what meanings they attach to certain actions and practices, what patterns of meaning and practices exist, how they are distributed within a society and how boundaries are drawn between groups. The identification of patterns allows us to reflect the order a group of people or a society have given the individual-environment interaction.

The investigation of the cultural dimension of health would give particular emphasis to three notions:

- _The personal interpretations that help individuals adapt to everyday experiences of health and illness_. A perspective on culture allows us to challenge the notion that developed societies live only according to cognitive rules. People do not only have needs but also dreams and desires. Dreams can lead actions as much as dire necessity can. To put it in simple terms: your dream of looking/being like Lauren Bacall or Humphrey Bogart will be one of the elements that make you reach for a cigarette and hold it in a certain way. The dream of what constitutes the good life will influence your way of coping with reality. Dreams keep people alive and they drive them to their death. They can be individual or collective. Many other societies acknowledge the reality of dreams and cannot understand the exclusion of this other world from Western culture.

- _The role of rituals_. Boundaries and rituals constitute an order within societies which makes behaviour within a certain context predictable and gives security for everyday actions. Social change brings with it the breakdown of this predictability and periods of transition in society require special attention in relation to their health consequences. On an individual level, most societies have developed rituals to deal with both positive and difficult life transitions such as puberty or death. Developed societies tend to offer professional rituals for such social events rather than community-based rituals. New community-based rituals are slowly being developed, for example in self-help groups, to fill the gap.

- The boundaries between health systems and the order and rules that maintain boundaries. Analysis along these lines would help clarify which group or groups have the power of defining what is accepted as normal in terms of health and illness and at what points the boundaries of the acceptable are extended due to strong pressure or social change. The respective health worlds or health cultures reflect the power structure within health and the structure of communication within each health world. These elements allows us to define the dominant approach to health within a society or towards a specific group and analyze what level of medication or professionalization has been reached.

Ecological traditions in health cultures

An ecological view of health is reflected in the views many traditional societies hold on the interaction between individuals and their physical and social environment. It would be wrong to idealize traditional health cultures, presupposing that they are, or have been wholistic per se - but given the present idealization of western medical culture, it is well worth considering the potential for health promotion that is present in all societies.

Traditional Chinese and Indian medicine operate in terms of synchronicity and dynamic development. Both the healthy individual and the healthy society are considered parts of a greater order which then forms the basis of the diagnosis. Many traditional societies organize the health process not as a one-way medical procedure of diagnosis but as a public procedure or social process which lays open issues and conflicts not even known to the "patient" herself. This calls to mind the "consciousness raising" technique of the women's health movement (actually taken from the Chinese notion of "speak out" in front of the whole village).

An explanation for the failure of health education approaches exported from the North to the South may lie in the fact that they have tended to stress individual health rather than provide an integrated concept for a whole social group. For example, it would be difficult to find a word that corresponds to "personhood" in a number of African languages. A similar notion applies in Japan where a person defines herself in terms of her social ties and, a frame of "belongingness" for which again we can find no appropriate translation.

The tendency in traditional societies is perhaps to underestimate the individual. The group rather than the individual defines the problem. The notion of person and personhood differs greatly between cultures, with western notions of individual self-fulfilment and individual health still constituting the thinking of the minority.

Patterns of health practices

Health promotion looks at general behaviour in the context of health and at specific health behaviour in its wider social context. People's life is their health, but health is not their reason for living. The value attached to health differs greatly between and within societies. Research on health behaviour, health practices and health actions has only just begun to identify positive and negative health practices and to relate them to the individual's position in the social structure and the way of life in a society. Some existing research could be reinterpreted with this view in mind.

It is useful to identify two types of health behaviours:

- health-directed practices that are consciously undertaken to maintain health or reduce illness; and
- health-related practices that are part of everyday life and either directly or indirectly influence a person's health status.

Health-related practices are practically impossible to isolate from the general lifestyle of a society or cultural group. The tendency to isolate health related practices such as smoking, has led to risk factor programmes that have focussed on the direct and isolated relationship between a certain practice and its health outcome (i.e. smoking and heart disease) while neglecting the position of a person in society. This position is important in two ways: (a) in relation to socioeconomic and demographic variables such as poverty, gender, education or age, which are in themselves interrelated in structured ways; and (b) in relation to the meaning attached to certain practices in everyday life within the context of one's reference group.

In most investigations of lay health and illness behaviour, these subjects have been defined predominantly in terms of the use of professional services. Even the studies that have investigated the subject of self-care may define the concept narrowly as the use of herbal or chemical substances and in terms of a dichotomy - as behaviour alternative to contacting professional care-givers. Such a limited concept of self-care behaviour may exclude some of its most beneficial forms such as stress containment or responses to illness which are directed towards the cause rather than the alleviation of symptoms.

It is known from those few investigations which have reviewed the full range of self-care from the individual's perspective that the range of self-care is exceedingly wide. Health-protective behaviour may include alterations in diet, smoking or use of alcohol, obtaining fresh air or exercise, relaxation techniques or changing daily routines. Forms of social interaction have been reported as both health maintenance and symptom-response self-care.

Dilemma of choice and prohibition

Within a health promotion approach it becomes necessary to see health related and health directed practices as an expression of social and cultural patterns. Health promotion aims to develop individual competence to reorient action within this pattern, to transcend the pattern or through environmental intervention to reorient the pattern towards health. That is the content of the slogan "to make the healthier choices the easier choices". Choice is a North concept. Life chances are more relevant to the South.

Since health promotion does not aim to change personalities but to enable positive health practices, we need to consider specific contexts in which individuals or groups tend to behave in a certain way (in pubs, under stress, while driving a car) and provide suggestions and opportunities on how these "social situations" could be restructured to encourage new patterns of behaviour. Within psychology this has been termed "the grammar of social situations"; within anthropology it would refer mainly to boundaries and rituals. At its best, health promotion would be part of an open social process which gradually changes values in society, with relevant groups acting as agents of change, rather than a "closed" approach of prescription and prohibition from above. Of course such redefinitions of contextual behaviour and rituals have a highly normative character and may often clash with values that are more important than health to the group concerned.

Redefinitions of norms and rituals are continually being produced and developed by various sectors of society. Religion, the media or industry play a central role, as in the strategy of the cigarette industry to increase sales in the Third World or the opposition to family planning by some religious and political leaders.

The place we give to health in our lives, as compared with other concerns, may differ from person to person; it differs at various stages of the life-cycle. The place of health may differ from society to society, and it is both socioeconomic and cultural factors that determine this difference.

Risk behaviour and coping

The cutting edge between concepts of risk behaviour and concepts of coping can be illustrated as follows: many people in order to get through everyday life endanger their health and are constantly exposed to health threats which are beyond their immediate control. They have to develop modes of coping, i.e. modes of managing demands from both external and internal sources.

People face health risks every day. Risk behaviour is a form of coping but it is usually understood in a narrow sense as "a behaviour leading to a risk of losing one's health". The phrase has gained particular prominence within epidemiological research in relation to risk factors such as smoking, cholesterol and high blood pressure. The concept of epidemiological risk has ruled the planning of health care over the years. Risk factors have been defined when the research has revealed a relationship between a disease and some single factor. While in many cases it has not been possible to prove a causal relationship, it has been possible in some, as in the relationship of smoking to several diseases. The notion of "health risk" has been expanded gradually by the medical system. For example, in the ever-increasing intervention of medicine in childbirth, women have consistently lost part of their freedom to opt for a particular type of behaviour and/or treatment. Studies of alternative services show that one of the special attractions of those services for the public is that they have adopted a different concept of risk, in that the persons concerned are involved in the decision-making process and are allowed to make the final choice. Risk factors have served as the basis for health education, which has been planned from the angle of one single risk factor (or more rarely several single factors at the same time). This approach has been criticised heavily because it splits up behaviours and is based on single habits; it explains only a small percentage of morbidity; it does not include the assessment of risk by the population itself.

Theoretical and educational models often assume that human behaviour is a relatively rational striving towards the best possible solutions from the health point of view. We are increasingly being faced with the fact that it is difficult to create general models of the conformities of human behaviour. People do not necessarily rationalize their behaviour according to one single value. Marketing research builds on the values of fantasies and dreams, hopes and desires, not on rational guidelines for behaviour.

Risk behaviour may constitute a way in which the individual can deal with conflicts that arise in everyday life and regain the physical and psychological ability to face up to them again. The risks are taken personally, with an eye to individual benefit, not to the degree of social acceptance or rejection they may provoke. Often such behaviour patterns are highly acceptable within a culture and are promoted by the mass media, advertising and traditions. "You need a drink", "Take a pill", "Have a cigarette", etc. are phrases suggesting that coping with conflict situations is a matter of conformity. Attempts to encourage individuals to adopt positive coping styles must allow for the fact that their present behaviour is not merely a matter of free choice; it may more often be a desperate reaction in an attempt to find a way to deal with individual problems as well as the problems of society.

In industrialized countries the increasing number of recognized health hazards has made it difficult to perceive their reality and extent. Health risks are nowadays discussed daily and they seem constantly to increase in amount. There is little research on how people experience risks posed to their health and how much control they feel they have over them. Environmental risks, the threat of war, the fear of unemployment are risks viewed quite differently by professionals, decision-makers and members of the public. Health is often a receding factor compared to price policy, agricultural policy or employment policy. In such circumstances, policy decisions that increase health risks are often consciously made from an economic perspective. The discrepancy is even greater for developing countries where economic development is seen as a guarantee for better health.

Risk behaviour plays a major role in establishing an identity and in testing the control the individual has over the environment and self; this aspect of risk behaviour is important in understanding why some young people adopt patterns of behaviour that involve risks for their health; only too often such patterns are merely dubbed "irresponsible" rather than being considered in the context of a period of transition from one stage of life to another. Perhaps social, emotional and physical well-being are not always compatible.

Feelings of powerlessness are a major factor in understanding risk behaviour. Any decision on how to act or react in a social situation is determined by what risks are considered acceptable, but acceptability is not always subject to individual control.

Many "unhealthy choices" as currently defined must be viewed in their wider social context - the social conditions under which health-damaging "choices" occur reflect efforts at stress management and coping, a desire to conform to peer group norms, or a minimal expression of power in the context of lives characterized by isolation, alienation or excessive strain. We must ask if some risk-reduction campaigns and screening programmes have a negative impact on health by increasing fear of cancer and of some of the other so-called "killer diseases". We need to expand our knowledge base to include assessments of the social and psychological consequences of the increased awareness of risk-factors and prevention approaches ranging from changes in diet to changes in individual behaviour designed to prevent rape.

Health education efforts are often most effective when recipients feel at risk of damage or need to prevent something they wish to avoid. We need to ask if there are "tipping points" beyond which individuals experience everything they do as so "risky" that it is best to ignore all such advice - or even take up especially hazardous activities or behaviour. The experience of probable death from nuclear war, for example, must be explored as a factor which undermines attempts to motivate people to reduce ordinary risks in everyday life.

If we move coping into a social context we can see that no given pattern of coping works in the same way in all circumstances. But we can, at the same time, trace patterns of coping for classes of people and classes of contexts. We can also show that, in certain contexts, certain coping resources and coping skills have made all the difference. Health promotion therefore seeks to open coping options to both individuals and groups.

Risk behaviour involves both coping styles and options for coping. If it is the cultural pattern learned from early life that one takes a drink after work to relax, or offers a cigarette in order to get to know somebody, then the health effects of this behaviour will not be important in the decision. Coping takes on a specific meaning when seen first as a pattern learned within a culture. We can distinguish between coping mechanisms that influence health:

- general coping styles that are cultural in origin and can have positive or negative health effects on health status;
- coping styles that are consciously undertaken to promote health and well-being, and to cope with illness.

We must stress the relational aspect of coping, its role as a component of a larger culture and society. The individual learns to employ culturally constituted coping mechanisms that influence not only behaviour but feelings along the lines of cultural patterns and codes. This applies not only to "normal" behaviour but also holds true for deviant behaviour. Reactions that are termed irrational by professionals often show a clear meaning when defined in a cultural context.

Coping processes are in no way always appraised consciously. The more they are linked to the strains of everyday life rather than specific events, the more they will be coped with routinely or by certain rituals. The process merges the individual coping traits, the cultural coping styles and the society's barriers and reinforcements.

Health promotion takes a different view of people and their problems: it credits them with a will and awareness to influence the situation. From the point of view of health promotion, the most important question is whose order of preference should be seen as the starting point for action. Traditional public health ranks risks according to mortality statistics. Health promotion that starts from the people's definition of needs would concentrate especially on those factors that the people see as a threat.

Strategies for health: the balance between education advocacy and structural approaches

Structural support and health education are too often seen separately but both are critical to the context of health promotion. Taken together, these strategies can bring about positive changes which reinforce one another. A synergistic effect can be facilitated working at different levels, from the individual, the community and the nation or state. These strategies and concepts can, of course, be applied at a general level, but they also allow for concrete measures to improve the health of special population groups. All the strategies discussed have been used in a variety of countries and within a variety of movements directed at social and political change. (See Expert Committee on Health Education in Primary Health Care). They have been demonstrated as effective tools, which can now be used in a health promotion context.

Information and knowledge base: the challenge for health education

Although in some countries there appears to be an overwhelming amount of health information, there remains a need for positive health information which reflects people's own experience of health and illness. Information must be a two-way process and be presented in forms which take into account the specific socio-cultural conditions of the people involved. Increased attention must be directed towards using media, print materials and personal presentations which reflect the specific realities of social class, gender, race, ethnicity and cultural values. Health information is particularly important for people who are not literate and who experience a multitude of barriers to achieving health. It should reduce, not increase, inequalities in health. The most effective information presents concrete, positive ways of achieving improvements in health rather than simply stating an idea or emphasising what one should or should not do. Health education and information will need to be developed along three lines in order to move towards people's autonomy of information:

- raising individual competence and knowledge about health and illness, about the body and its functions, about prevention and coping;
- raising competence and knowledge to use the health care system and to understand its functioning;
- raising awareness about social, political and environmental factors that influence health.

Contextual health information would help to develop new ways of looking at old problems. For too long, health problems such as smoking have been treated as isolated from the rest of society and as isolated from other beliefs and behaviours. It seems reasonable that health information should "go with the flow" in the sense that it should be aware of already widely recognized public problems that have caught the general concern or at least have the support of major power or pressure groups and redefine the health problem. There is no reason, for example, why smoking must be discussed mainly in terms of individual health: it can be linked to central issues such as employment, agricultural policy, Third World concerns and environmental protection. Developing effective health education and promotion material often takes considerably more time than simply prescriptive material because the process requires attention to detail and consultation with groups and individuals.

To create a knowledge base adequate for such information strategies, we must transform the value orientation, methods and social organization of research. Since health flows out of everyday life, the research focus moves towards people's contributions towards health. It would both aim at clarifying which factors constitute health - e.g. positive coping strategies, social support networks, coherence, - and the environmental obstacles that stand between people and their health - e.g. poverty, unemployment, alienation, unrewarding work. The risks populations are exposed to and the risks they take themselves need to be analysed in their constant interaction and interdependency in order to understand the patterns of everyday health practices.

In recent years, increasing emphasis has been placed on personal experience as a basis for health education. The lay self-help movement highlights the central role of personal experience in defining, preventing and managing health problems. A central tenet of lay self-help groups is that persons who have experienced a health condition have an understanding of that condition which those without it do not comprehend fully. This includes the meaning and management of routine health matters, chronic conditions and threats to health. Knowledge gained from experience also alerts us to health conditions which may be highly significant to well-being, but which have largely been ignored by clinicians or epidemiologists.

Within a health promotion approach, health expectancy is a central principle of evaluation. The level of daily well-being free from pain, anxiety and depression would be measured and a high value would be placed on subjectively perceived health. We need to research systematically the effects of nurturing and caring on well-being as well as on conventional morbidity and mortality outcomes. We also need to research how informal care-giving is performed in all societies in ways which explicitly address the sex of both care-givers and receivers and the implications of gender for both the delivery and receipt of health promoting activities. In the poor countries of the world, providing basic goods for a better quality of life and avoiding early death are still fundamental preoccupations. In developed societies, days of impaired well-being measured within a population with a similar life expectancy give a clearer indication of actual health than the mortality indicators normally applied.

If we knew more about the distribution of these experiences of impaired well-being, we might alter our perception of the relative importance of the so-called "killer diseases" such as cancer and heart disease. A new epidemiology of violence and of chronic impairments of everyday life might suggest new priorities for allocating resources for preventive care and supportive services. In the framework of this new epidemiology, "healthy lifestyles" would no longer focus on individual "risk factor reduction" but on new definitions of significant health problems.

An additional knowledge base for health education and promotion is health knowledge that has been suppressed and devalued. Folk practices and systems of caring such as lay midwifery have been ignored or suppressed directly by medical authorities in many countries. An obvious parallel might be made between western medicine's devaluation of women's practices and the devaluation of traditional Eastern healing practices such as acupuncture which in recent years have gained recognition. We must learn that much of what is valuable for health and healing does not fit the model of western, scientific medicine which is oriented towards an exclusively biomedical definition of disease and intervention.

Empowerment: the active health role of the public

Health promotion strategies would move on to develop learning approaches and contexts that allow for an active health role and direct empowerment of the public. Empowerment is the ability of people to manage their lives, to recognize and meet their needs, and to fulfil their potential as creative, responsible and productive members of society. Examples of such supportive health education are available from self-help groups, the women's health movement, groups which help their members to cope with chronic disease, patient education and community action.

Consciousness-raising as developed and practised by the women's movement and the similar process called "popular education" developed in South America constitute powerful strategies for promoting health. They provide opportunities for people with a common problem to discuss what is common and what is different in their experience. Such a process can break down physical and social isolation and can validate the importance of each and every person involved. It provides an opportunity to grasp the collective reality of individual experience and leads people to feel more confident to act on their own behalf.

"Popular education" has been used in many countries throughout the world to facilitate literacy, better nutrition, health care and working conditions. It relies on facilitators to generate a dialogue which elicits people's daily concerns. The facilitator poses questions and provides a structure for the group to work in, and yet is a peer who will learn as much as the other participants. The learning that occurs is based on what people need and want to know, in their social-political context, rather than what is considered important for them to know *a priori* by "experts".

Popular education draws on the participants to define solutions to problems and then act on them as a group. The emphasis on collective decision-making and action gives participants a sense of power and responsibility. The strength of the popular education method is that it fosters cooperation, support and sharing and encourages autonomy and self-determination.

The evaluation of the experiences with these educational strategies would be a valuable and necessary challenge to health education and ensure the protection against approaches that preach healthism and are prone to "blaming the victim". It has been estimated that changes in values at the grass-roots can take 20 to 30 years to become an approved part of popular culture and beliefs. Short- and long-term goals in relation to positive and negative health behaviour need to be thought through clearly, so that programmes can be planned realistically. This best ensures against unrealistic expectations towards health education.

Health promotion moves from a delivery mode of intervention to an enabling and support mode with a focus on localities and social action for health. It searches out a collective means to express preferences in health and encourages the articulation of the needs of discriminated and disadvantaged groups. It aims at a new balance between the universality of protection and the diversity of expression. Health for the disadvantaged moves away from a notion of charity to a notion of rights to health and independence. Support mechanisms for people's own collective action for health - as in community action, self-help groups, health movements, neighbourhood help, to name but a few - include:

- legitimizing their contribution to the health of the community as part of the total care resource the community has to offer;

- providing access to information they deem necessary for their activities;
- providing funds to enable their continuous contribution;
- assisting with networking in order to create community health links between groups with common interests;
- creating the continuous dialogue between administrative, professional and social action towards health in the community to allow for the cross-fertilization of ideas and innovations.

A tool to bring together the different interest in such a dialogue is community diagnosis, performed by members of the community themselves and providing a concrete expression of the communities' wishes and efforts to define their health needs. Such data on local health cultures would facilitate discussions between all health participants in the community and open avenues to innovative approaches to community health promotion and planning at local level.

The policy aim of health promotion is to secure equal access to health and to foster and support a social environment conducive to health. Their relevance of social support and caring relationships to health is gaining increased recognition. In order to develop ways of life based on mutually sustaining and mutually health-giving relationships, the caring resource of all members of society - young and old, male and female - has to be recognized. Care rather than cure, and care as a central element of cure and rehabilitation will need to move into the foreground of health and welfare policy if we are to master the health problems of the future and wish to create and ensure health promoting environments. Serious thought must be given to mechanisms that will promote solidarity and care within the community and which at the same time help to overcome the undue burden of caring responsibilities put on women. The burden must be distributed so that it is no longer a burden, but is life-enhancing and not just a matter of financial resources and paid employment.

Women's knowledge of caring must become a fundamental knowledge base for health promotion. Models have been developed that support community based care rather than institutionalization but our thinking and practice will have to move far beyond such first steps. The changing role of women, the family, and kinship patterns will make the support of new social arrangements and networks a serious challenge for innovative social policy. Creating and supporting structures of mutual support will need to become a major approach within health promotion.

Promoting change at structural level: advocacy and healthy public policy

The interdependence between health and the social and economic environment as stated in the Declaration of Alma Ata needs constant reiteration. Even the most developed nations cannot assume automatic progress towards health and need to survey regularly its continuously changing context. Governments need to seek out manageable starting points for intersectoral action and health ministries need to specify their requirements from other sectors. Political will needs to be mobilized to reexamine budgetary approaches and develop mechanisms for reallocations that would reflect the shift of policy towards health.

Political

Health promotion would develop an advisory role and should include information relevant to policy. It would develop strategies that set goals for both personal and political decisions. It would be prepared for the counter-arguments of vested interest, demonstrate political feasibility and organizational possibilities and propose various forms of cost-benefit analysis. Health promotion needs to become as professional and as prepared as its opponents and will need to learn to understand the political process in detail. Health promotion could play a central part in developing a new type of health economics which builds on social responsibility.

Legal

Because many health-damaging factors are environmentally based, health promotion must accept the mandate to be involved themselves in efforts to reduce hazards through legislation and legal means. Popular education and community organization can stimulate the growth of constituencies to provide legislative bodies with research and public opinion which supports needed change. Organized groups can also develop skills for monitoring the progress of legislation, influence the likelihood of such legislation being passed, and ensure that where legal enforcement mechanisms are available they are used and publicized.

Economic

Health promotion can also stimulate support for funding research and strategies for shifting economics away from the manufacture of products which are damaging to health in both developing and developed countries. Strategies to do this can also incorporate positive mechanisms for providing new roles in economic production which have the potential to enhance their health through access to economic resources and social contact. The dilemmas public policies for health face are manifold. In many countries, industries are subsidised in direct and indirect ways, even though their products are harmful to health and harmful products are freely advertised. National economies may finance health promotion programmes and at the same time depend heavily on revenue from taxing unhealthy goods. Health-damaging products are exported to and promoted in developing countries, compounding their already serious health problems. Gross inequality in income distribution creates poverty groups with such limited financial means that choosing a healthy lifestyle is precluded.

Widening responsibilities for health

Health promotion requires the use of a wide range of expertise and skills outside the traditional health care and health education sector as well as within. Using the term "promotion" allows for contact and involvement with a wide array of actors: politicians, bureaucrats, industry, professionals, religious leaders, pressure groups, the public at large, the media. Since all these together shape the way of life in a society and exert pressure on what is the dominant lifestyle, they all play a role within health promotion. It is dangerous on the one hand to say "Health promotion is everybody's business" since it can be interpreted to mean that nobody will take responsibility for it. On the other hand, such a slogan reflects the need to widen our conception of who is responsible for health and health promotion.

We need to create adequate structures and forms of implementation that take account of this new type of intersectorality. Mechanisms and platforms must be established that create new allegiances for health and allow support to be enlisted within non-health sectors of society.

Part of making health promotion everybody's business in the most positive terms is to recognize that public discussion of health is in itself a major public health issue which challenges dominant thinking and prepares the climate for change. As such, the new public health recognizes the importance of shaping and supporting the very process of policy-making for health. New mechanisms for such policy formulation must be established and new types of consultations with new actors need to be accepted. The possibilities of new information technologies must be explored.

Health promotion would aim at reaching and educating change agents such as voluntary organizations, commercial enterprises, politicians, pressure groups, and the media of all kinds. In such a way, new alliances can be created. It also means that health promotion can enlist support for health by making it a common cause.

Governments need to understand possible large-scale changes in society and health and to establish regular national health promotion surveys to provide a more detailed data base for health promotion policies and programmes on actual health practices. They should also collect data on the factors influencing people's perceptions about health and the ways in which these factors bear on the health status of a given individual. They should introduce health impact statements as a means of assessment and of relating every facet of public policy to the health of the population. They should lay open the social and economic hazards to health.

This strategy would allow for a move towards a new basis for political accountability in health and provide the basis for a broad public discussion on health matters.

Global dimensions

The new public health is aware of global responsibilities for health and recognizes the need for international health action - both by governments and social movements for health. It is aware of the need for international security based on peace and disarmament to allow healthy public policy to develop nationally. It aims to foster the equal sharing of possibilities and opportunities for health, both in terms of knowledge and resources. As such, it pays attention to international economic relations, particularly as they affect the developing world.

It aims to free itself from cultural biases and aims to recognize the different notions of health that exist worldwide. There are as many notions of health as there are of happiness, beauty or well-being and there are a variety of solutions to similar problems. The new public health can hope to pay its contribution to bringing them together in a dialogue and action towards Health For All.

But it is necessary to go yet one step further. The ecological thinking of the new public health draws our attention to the responsibility we have, not just for healthy individuals or healthy nations but for the planet as a whole. It includes the consciousness that our own well-being is based on our responsibility towards the natural resources and other forms of life on this planet.

Acknowledgements

This paper would not have been possible without the generous sharing of many people in its development. I of course want to hold no one responsible for what I have done with her or his work or ideas, for they might not recognize or like the way I have put their thinking into my own context.

I have drawn heavily from the background papers prepared especially for this work:

1. Dr H. Vertio "Risk Behaviour".
2. Mr E. Donaghue "Organizational model for a health promotion coordinating body at national level".
3. Dr J. Cowley "When health promotion works, the opposition begins".
4. Dr S. Ruzek/Ms J. Hill "Positive approaches to promoting women's health".
5. Dr N. Stott "The role of health promotion in general practice".
6. Dr M. Rimpela "Perceiving health".
7. Dr M. Ingrosso: Strategies and cultural orientations of families with regard to health.
8. Dr G. Siler-Wells: The Double Helix of Health.

Of the many people who attended WHO meetings on health promotion and who have supported and guided the development of the Health promotion programme of the World Heath Organization Regional Office for Europe I would like to mention:

> Lowell Levin, Ron Draper, Bernhard Badura, James Robertson, Kathryn Dean, Kimmo Leppo, Werner Schmidt, Robert Anderson, Peter Draper, Nancy Milio, and finally all those who had to bear the burden of doing my "other" work, while I was writing, especially my secretary Sue Line-Irmov.